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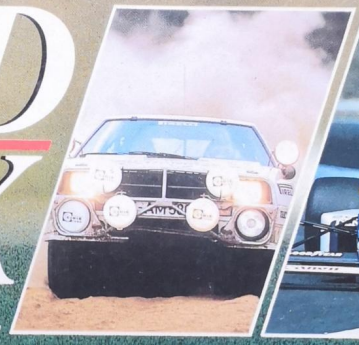

FORMULA ONE
Brazil, Spain

PROFILE
Gerhard Berger

RALLYING
Safari

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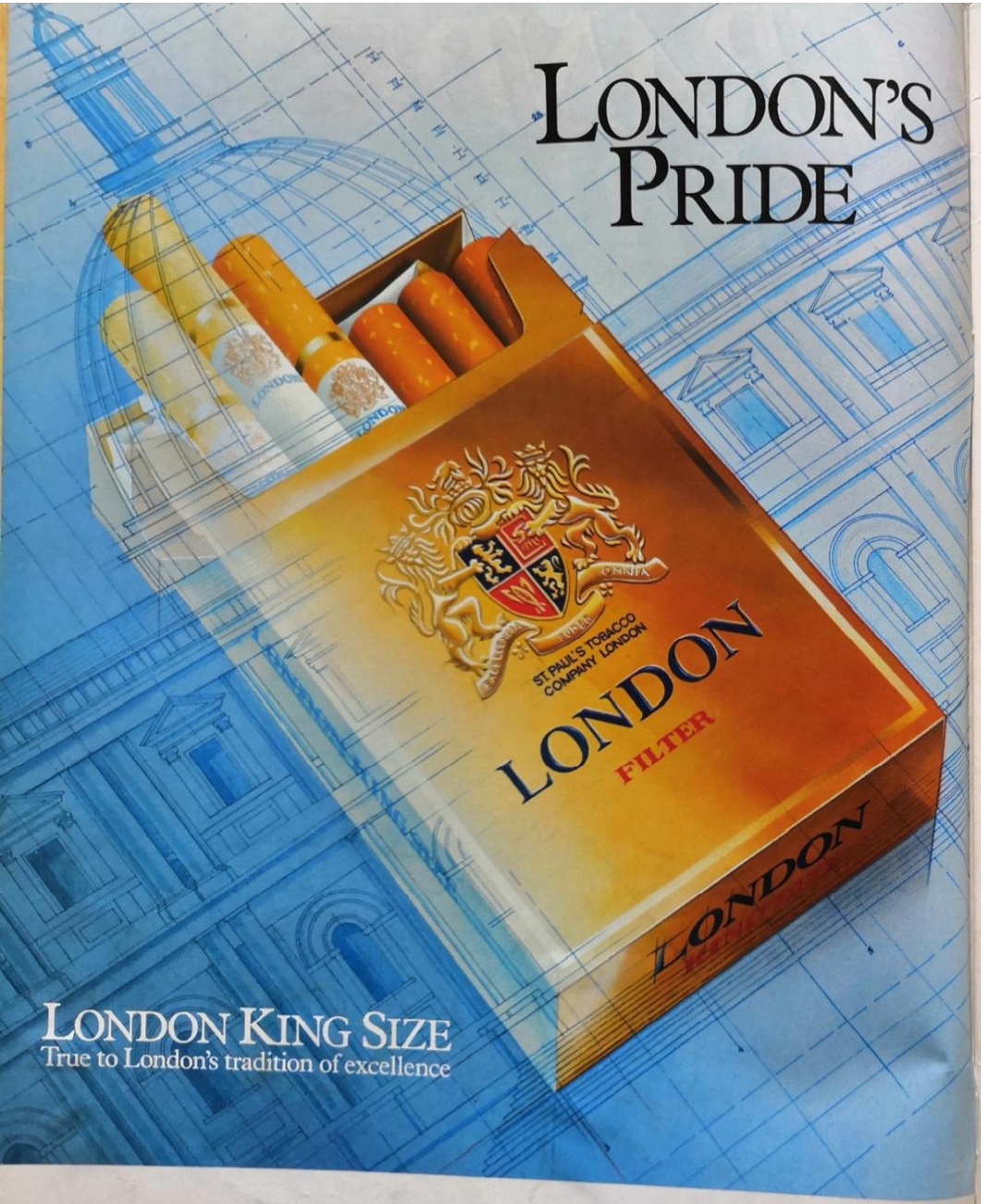

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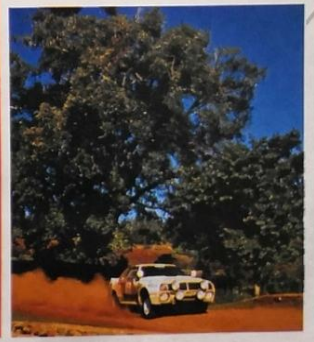

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TOPICS

Doug Shierson could well give the Renault V6 engine its debut in the CART series at Portland in June with Al Unser Jr. at the wheel. Ross Cheever has recently been putting the French engine through its paces.

A third of the tickets for the Watkins Glen NASCAR meeting on 10th August have already been sold. Proof that the formula is just as popular with American enthusiasts.

A.J. Foyt has placed an order for five CART-spec March 86Cs for his Gilmore Racing team. Three will be fitted with the Cosworth DFX, two with the Chevy V6 Turbo.

Winners at Le Mans in 1979, Don and Bill Whittington are suspected by the police for involvement in trafficking drugs.

Former F1 World Champion, James Hunt, will act as coach to Swedish driver, Thomas Kaiser, who has resigned with the BS Automotive F3000 team.

Chris Amon, the former Ferrari F1 driver, who retired from racing 10 years ago, is to make a return to the sport at the wheel of a Toyota Supra in the New Zealand Production Car Championship.

The Brabham F1 team prolonged their stay in Rio after the Brazilian GP in order to get in three days of extensive testing.

The American Galles Racing Team will enter no less than five Lola 86/00s for Indianapolis. Two will be fitted with the Honda V8 Turbo, the three others with the Cosworth DFX.

Sandro Sala was invited to test the new Benetton B186 at Silverstone after the Brazilian GP.

FERRARI: CODEWORD DISCRETION

Very little information emanated from Maranello during the winter break, the Italian team preferring to get on with the development of the F1/86 without making a lot of noise. Piero Lardi-Ferrari had no intentions of making excuses for the 156/85 when he announced *"It is important that we understand where we made mistakes on last year's car before we introduce the definitive version of the F1/86. Having run out of time, we will be starting the 1986 season with a revised version of the 156 and the new car will be introduced during the season."*

Indeed, much work has been carried out by the Ferrari technicians whose ranks have been swelled by the arrival of J-J. His and J-C. Migeod, formerly with Renault as motorist and aerodynamic specialist respectively.

When the 156/86 was presented, it was announced as an evolution of the previous season's car, the modifications essentially concerning aerodynamics, engine and suspension, but the new car strikes us as being more than just a simple revision of the 156/85. Perhaps the Italian engineers are only prepared to call their car 'new' when it is as radically different as the BT55 is to the BT54.

The former two-piece carbon chassis has made way for a monocoque chassis, the roll over bar is now incorporated in the shell and, as a result of the lowering of the fuel tank, it has been possible to render the lines of the engine cover more harmonious, recalling somewhat the profile of the 1983 Ferrari.

With pullrod suspension at the front and pushrod at the rear, the spring/damper units are now mounted in a 'V'. At the rear, they are mounted directly onto the engine/gearbox spacer, a modification which permits the use of a wider, longer extractor with a cleaner design and which should have a positive effect on the aerodynamics at the rear.

The Italian manufacturer has also made use of composite materials for their rear suspensions, the upper wishbones now being made out of carbon fibre, although it has been neccessary to conserve a metal core no doubt in an effort to withstand the higher stresses caused by the new, higher damper fixation points.

The famous V6 turbo has not been forgotten and the cylinder heads, sump and lubrification system have all been revised. Ferrari give power as 850 bhp in race configuration and 1,000 bhp for qualifying but, at a time when most other constructors are turning to 6 or even 7-speed gearboxes, Alboreto and Johansson will only have 5-speeds available, at least for the time being.

DIMENSIONS
Wheelbase 2m766
Front track 1m807
Rear track 1m663
Length 4m296
Width 2m120
Height 0m920

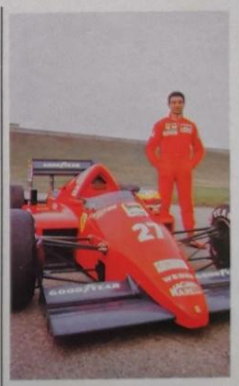
PORSCHE GET READY

It was the turn of Porsche to go testing at Paul Ricard just before Easter. The week's testing was carried out exclusively on the 5.8 km circuit with two 962s (chassis nos. 01 and 04), one with a view to the forthcoming IMSA series and driven by Bob Wollek, the other driven by Hans Stuck and destined for the World Endurance Championship.

It was the first time that the 962 has been fitted with the PDK semi-automatic gearbox which, until now, has only been seen on the 956. The German manufacturer plans using the PDK box for all five races programmed by the factory team; Monza, Silverstone, Le Mans, Spa and Nurburgring. Stuck, who put in a total of 1,200 km with a best time of 1m 44.9s, said that three cars were planned for Le Mans. Two with the conventional gearbox and one with the semi-automatic gearbox. Other work carried out at the French circuit with a view to the WEC concerned fuel consumption and adaptation of the new Dunlop rubber.

Bob Wollek, brought into the team as replacement for Jacky Ickx, put in a lot of engine testing with the IMSA 962, paying particular attention to power, turbo lag and acceleration from low engine speeds. *"Since the factory will not officially be competing in IMSA, we have been carrying out research and development work for our clients in an attempt to give them the best possible chances in a highly competitive championship. The fact that the 962 is relatively handicapped by its weight, Porsche have been looking at ways of increasing power..."* Wollek averaged fifty or so laps per day, with a best time of 1m 46.5s.

The latest generation dashboard features an entirely electronic, colour-coded display; green means everything's OK, yellow means be alert, red means head for the pits.



Does Alboreto's sideways glance at the latest from Maranello indicate that the 156/86 still requires some work if it is to be competitive.

NEW SEASON, SAME SCRIPT

After a break of almost five months, the eagerly awaited start to the Grand Prix racing season in Brazil was far from disappointing. In spite of Nelson Piquet's widely predicted runaway victory, there were excellent performances from McLaren, Lotus and Ferrari. Furthermore, Ligier and Benetton showed every sign of being genuine forces to be reckoned with in 1986.

Disappointed though they will have been by Nigel Mansell's unfortunate first-lap incident, British fans had lots to cheer from Martin Brundle and new-boy Johnny Dumfries. And we can't see Derek Warwick being kept away for long from his rightful place in a competitive F1 car.

We need hardly add that there was a negative side to the beginning of the new season. Inevitably, it involved FISA and it's irascible president, who hit the Brazilian organisers with a 50,000 dollar fine for "conduct prejudicial to the prestige of the World Championship." To the puzzlement of the hundreds of local pressmen, he failed to explain the circumstances behind the incident, which would have been completely overlooked if it hadn't been the subject of a FISA press release.

Only a few days earlier, the same gentleman had brought scorn and derision on the International Federation by solemnly announcing details of a new rule under which National Federations would not be permitted to alternate their World Championship races between two or more circuits.

If there is a convincing reason for this decision (and one has yet to be communicated to us), then it was immediately invalidated by the announcement that "England" — as M Balestre insists on describing our United Kingdom — is "a special case," and will therefore probably continue to be allowed to alternate it's race between Brands Hatch and Silverstone, just as it has done for the past 22 years.

Needless to say, no reference was made to the cosy little arrangement under which Italy gets two World Championship races every year by the simple expedient of running one of them at Imola as the "San Marino Grand Prix."

Fortunately, the professionalism and dedication of the Formula 1 teams compensate splendidly for the lack of those qualities at FISA. And since it is the racing not the politics, which holds the attention of the millions who share the thrill of Formula 1 racing across the world on their TV screens, we can look forward to a year of good Grand Prix sport, hopefully free from any hamfisted interference from it's bureaucrats.

Good racing, everyone! — GPI

TYRRELL OPTIMISTIC FOR THE 015

The latest Tyrrell Formula 1 car was presented at Silverstone between the Brazilian and Spanish GPs in a prevailing atmosphere of optimism, something we haven't witnessed at a Tyrrell presentation since Depailler's 009 back in 1978. Ken himself was more than keen to announce his intentions for the coming months. *"With two cars in the top ten at Rio and two points in the bag thanks to Martin Brundle, the 1986 season has got off to a wonderful start for us. Given our experience, it is quite possible that either Martin or Philippe (Streiff) get into the top three with the 015, especially in the second half of the year. Everything depends on the reliability of the Renault engine but, with six finishers out of six in Brazil, things look promising."*

Maurice Philippe, designer of the British car, got started on the project last year, as soon as the sponsorship deal with Data General was made official, ie just before the South African GP. At first sight, the new car resembles the 014, there is no mistaking that it is indeed a Tyrrell, but this may be due to the lack of time that Philippe had to develop the 015. *"Despite what you may think,"* he pointed out, *"the only item which we have retained from the 014 is the steering wheel. The majority of our efforts have gone into improving aerodynamics and getting power onto the track."*

The chassis is of a mixed constitution with a carbon outer skin and aluminium honeycomb panels. The voluminous sidepods have been rendered necessary by the Renault V6 engine but the most apparent difference from the previous model is the suspension which adopts twin wishbones and pushrods. Philippe has opted for forward-facing inclined radiators much like the McLaren.

Tyrrell is conscious that much work remains to be done to fully exploit the new car. *"From now on, we will be more or less fully occupied racing. There is a Grand Prix nearly every fortnight. We are going to have to move quickly, especially since nearly 90% of the 015's components are manufactured in our own workshops, apart from the engine of course."* Brundle's first impressions at the wheel of the new car should be of encouragement for Ken. *"It is difficult to judge after only 20 laps or so but the 015 feels really good. Despite the fact that we are going to have to develop the car as we go along, I am very hopeful."*

DIMENSIONS

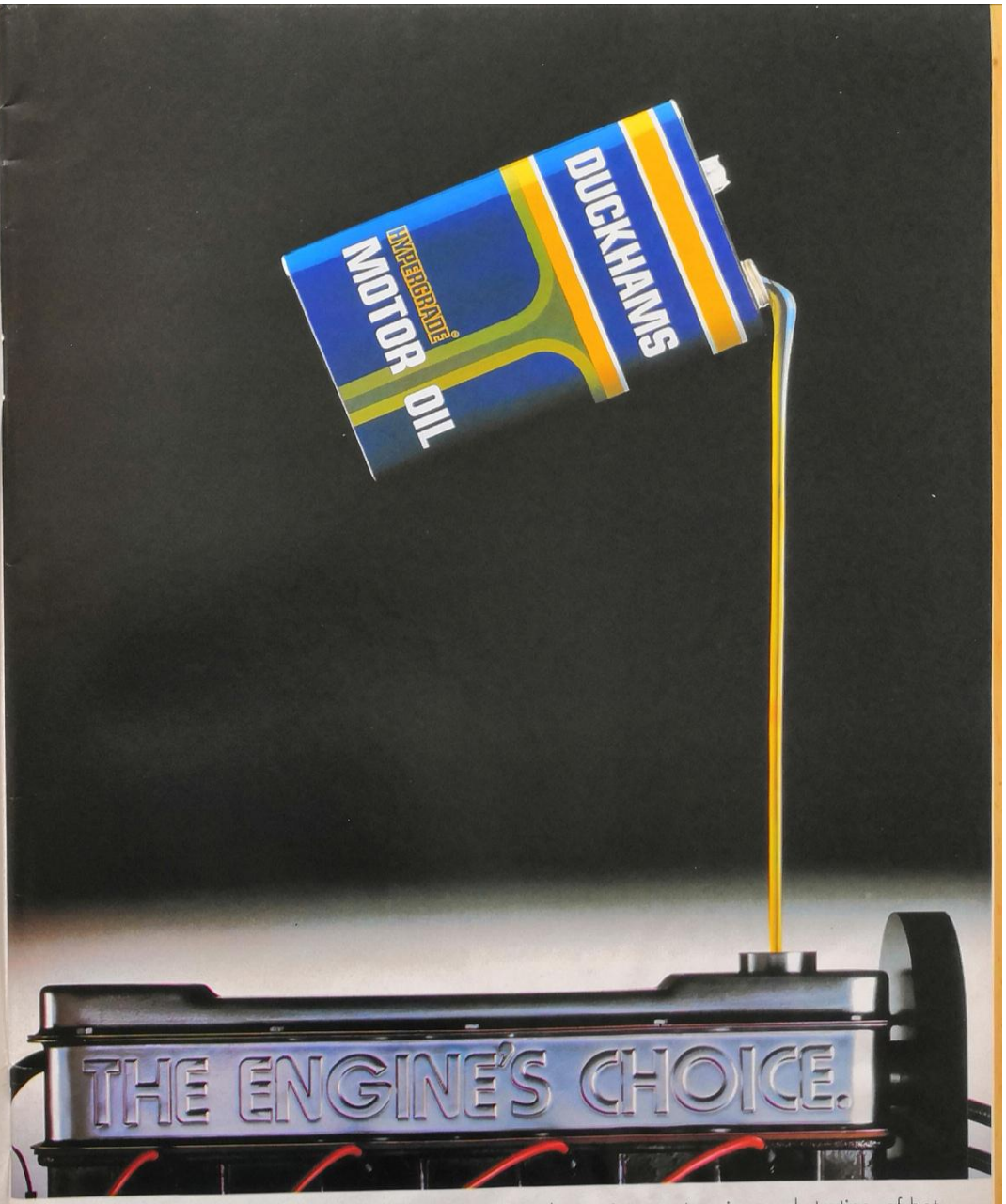
Length	4.305m
Width	2.108m
Height	0.991m
Front track	1.765m
Rear track	1.651m
Wheelbase	2.756m

ENDURANCE WITHOUT CHEETAH

There is little chance that we will see the valliant Cheetah/Aston Martin team in Endurance in 1986. It would appear that Chuck Graeminger is about to lose his sponsor, Gatoil, and the car will be placed under wraps at its Lausanne home in Switzerland. It will be a pity for the Group C series since the Cheetah supplied a breath of fresh air in the Porsche dominated series. *"Nothing's to say I won't be back in 1987,"* confirmed Graemingher .

PAUL RICARD GETS FRENCH GP

A contract for five years has been signed by the management of the Paul Ricard circuit and the French governing body to run the French round of the World F1 Championship on the Castellet circuit until 1990. As promised, a number of improvements will be carried out on the circuit and its facilities, including the building of a new control tower, a new 20,000 capacity stand, a 300 seat press room and a rebuild of the Pouas curve. The new 3.8 km circuit that we mentioned in GPI N° 102 will not be ready in time for this year's race as a result of the length of the discussions which opposed the two French circuits, Dijon and Paul Ricard, and the FFSA, but should come into use in 1987.



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BLUE IS THE COLOUR

Henri Pescarolo's famous green helmet is now a thing of the past. When agreeing to join the new Kouros Racing team, the French Endurance driver was perfectly aware that he was going to have to give up his favourite colour to comply with the wishes of the team's principal sponsor... Kouros perfumes from Yves Saint-Laurent. The French company's publicity campaign which will run in parallel to their sporting activities features the all blue helmet that will be worn by all drivers. Only a thin band of colour, red for Nielsen and green for 'Pesca', located at the bottom of the helmet will differentiate the two although it won't be an easy task to determine who's at the wheel once they are strapped in their group C Mercedes.

CHANGES FOR MONACO

Monaco's Grand Prix circuit will have changed for the forthcoming race on 11th May. The organisers have elected to modify the famous chicane which slows drivers as they rejoin the port-side section of the track. Indeed the modification is intended to further reduce entry speeds after the fast descent from Loews Tunnel, and the Quai des Etats-Unis has had to be extended to accommodate the tighter bends. The track-side will overhang the sea slightly at this point, supported by three massive concrete pillars. The change will probably make a difference of about two seconds a lap for F1 cars and the total lap length will be 16 metres longer. The modification has been introduced for security reasons since the fastest cars are at 286 kph as they come out of Loews and the chicane tended to put them off balance for the following bend. The escape road has also been extended by about 60 metres.

WILLIAMS IN THE SWING AT IMOLA

A number of teams managed to get in a bit of testing at Imola, host circuit to the San Marino GP, between the Rio and Jerez GPs. Not surprisingly, the Williams of Mansell and Piquet were fastest with the same car that had just won in Brazil and set the session's fastest times on soft 'C' race rubber. Piquet took over a second off Senna's 1985 pole-position time (1m 27.327s) by recording a fabulous 1m 25.95s and Mansell put in 1m 26.85s before concentrating on endurance-cum- consumption tests. Behind the two Honda-powered cars came the Ferraris of Johansson and Alboreto but with qualifying tyres. Note that Tambay's Lola was fitted with the new Ford engine.

TIMES

Piquet 1m 25.95s; Mansell 1m 26.85s; Johansson 1m 27.29s; Alboreto 1m 27.57s; Prost 1m 28.41s; Senna 1m 29.37s; Rosberg 1m 31.22s; Fabi 1m 31.62s; Tambay 1m 31.98s.

COGAN SPRINGS SURPRISE AT PHOENIX

The Phoenix 200 Miles race, opening round of the CART/ Indy championship, was won by Kevin Cogan in the Patrick Racing March 86C/Cosworth DFX ahead of Sneva and Emerson Fittipaldi. Qualifying for the race, which takes place in the middle of the Arizona Desert, had been dominated by the Andretti family with Mario pipping his son, Michael, to pole-position although the former World F1 Champion could finish no higher than 7th and Michael was forced to retire.

JAGUAR GET DOWN TO WORK

The complete Jaguar team spent five days in France on the Paul Ricard circuit to test the XJR-6 Group C car. Warwick, Cheever, Brancatelli and Schlesser had two cars with them, one in sprint-race specification, and the second set up for Le Mans. Principal new feature of the Jaguar is the twin disc brakes at the front and rear.

The major part of the week's work concerned the aerodynamics of the new models, as well as the power and fuel consumption of the engine. Since last year, the British car has shed 80 kg and is now at the minimum weight limit.

All four drivers put in a lot of laps on the 3.3 km circuit and Cheever achieved best time of the week with a 1m06.9s on racing tyres in front of Brancatelli (1m09.1s) and Warwick (1m09.2s). At the wheel of a 1985 model, Brancatelli and Schlesser relayed each other during an endurance test with racing tyres and a full tank of petrol. No important problems cropped up during the exercices which saw Brancatelli put in a 1m11.8s and Schlesser 1m12.0s.

Tom Walkinshaw also profited from the tests to put a number of other drivers through their paces with a view to selecting the crew for the third Jaguar at Le Mans.

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INTERESTING LE MANS IN STORE

The first provisional entry list for the le Mans 24 Hours, which takes place on the weekend of 31st May/1st June, has been released by the French organisers. The list shows no less than 9 cars which will take part in the classic French race for the first time and it will most probably be the occasion for the Porsche 961 to make its world debut.
Sixteen out of a total of thirty-two Group C cars will, in fact, be Porsches but nine different power units will be present in the category, including the works Nissans and it will be interesting to see if the Nissan R86Vs can repeat their Fuji performance of last year. Toyota and Mazda will also represent the interests of the Land of the Rising Sun, the latter entered in the IMSA GTP category.

The three Silk Cut Jaguars will probably be Porsche's biggest rivals at Le Mans especially since the XJR 6s will be in very capable hands and the Kouros Mercedes could spring a surprise or two. Yves Courage and the ever popular Alain de Cadenet will probably be aiming for a top-ten placing with the Primagaz Cougar, whereas it is unlikely that either the Rondeau M382 or the 482 will figure strongly following the recent death of their creator.
The C2 category looks as though it is going to be an all-British affair with Gordon Spice driving a Ford-engined Fiero Pontiac, two cars from the Ecurie Ecosse stables for Mallock and Leslie, Piper's interesting BBW-Mitsubishi powered Royale and John Barlett Racing's Chevron-Cosworth.

The organisers have reverted to the pre-race tests and most leading teams will be at the French circuit on 9th May in preparation for the real confrontation at the end of the month. The race is due to start at 16h00 on the Saturday and there is some good news for those of you who plan to go and watch; the entry prices have come down! Fuel consumption restrictions have also been revised and teams can look forward to an increase of around 15 % in petrol allowance.

TEAM	CAR	ENGINE	DRIVERS
GROUP C1			
1. Rothmans-Porsche	Porsche 962 C	Porsche	3710* J. Mass/B. Wollek
2. Rothmans-Porsche	Porsche 962 C	Porsche	3710* A. Holbert/X...
3. Rothmans-Porsche	Porsche 962 C	Porsche	3710* H.J. Stuck/D. Bell
7. Joest Racing	Porsche 956	Porsche	3710* K. Ludwig/P. Barilla
8. Joest Racing	Porsche 956	Porsche	3710* J. Winter/X...
9. Obermaier Racing GmbH	Porsche 956	Porsche	3708* J. Lassig/X...
10. Porsche Kremer Racing	Porsche 962 C	Porsche	3710* A. Ferté/C. Muller
11. Porsche Kremer Racing	Porsche 962 C	Porsche	3710* J. Gartner/Ph. Alliot/S. Van der Merwe
12. Primagaz	Porsche 956	Porsche	3710* P. Yver/H. Striebig/M. Cohen-Olivar
13. Primagaz	Cougar	Porsche 956	3710* Y. Courage/A. de Cadenet
14. Richard Lloyd Racing	Porsche 956	Porsche	3708* D. Olson/X...
17. Brun Motorsport	Porsche 962 C	Porsche	3708* O. Larrauri/P. Pajera
18. Brun Motorsport	Porsche 962 C	Porsche	3708* W. Brun/Th. Boutsen
19. Brun Motorsport	Porsche 956	Porsche	3708* M. Sigala/X...
20. Tiga Team	Tiga Ford	Cosworth	4620* T.L. Davey/N. Crang
22. Portman Lamborghini	Spice-Lamborghini	Lamborghini	5706 M. Baldi/T. Needell
23. Nissan Motorsports Inter.	Nissan R 86 V	Nissan	4152* M. Hasemi/T. Wada
28. Nissan Motorsports Inter.	Nissan R 86 V	Nissan	4152* K. Hoshino/K. Matsumoto/A. Hagiwara
33. Danone Porsche Espana	Porsche 956	Porsche	3708* E. de Villotta/F. Velez/J. Fernandez
36. Tom's Co. Ltd	Tom's 86 C Toyota	Toyota	2926* G. Lees/S. Nakajima/M. Sekiya
38. Dome Co. Ltd	Dome 86 C Toyota	Toyota	2926* E. Elgh/X...
41. Secateva	WM P 85	Peugeot	3990* R. Dorchy/M. Pignard/Cl. Haldi
45. Patrick Oudet	Rondeau M 382	Cosworth	3300 P. Oudet/J.C. Justice
46. Christian Bussi	Rondeau M 482	Cosworth	3300 Ch. Bussi/X...
51. Silk Cut Jaguar	TWR Jaguar	Jaguar	5993 D. Warwick/E. Cheever
52. Silk Cut Jaguar	TWR Jaguar	Jaguar	5993 J.L. Schlesser/G. Brantacelli
53. Silk Cut Jaguar	TWR Jaguar	Jaguar	5993 H. Heyer/Soper
55. John Fitzpatrick Racing	Porsche 956	Porsche	3708* X.../X...
61. Kouros Racing	Kouros Mercedes	Mercedes	6962* J. Nielsen/H. Pescarolo
62. Kouros Racing	Kouros Mercedes	Mercedes	6962* X.../X...
63. Ernst Schuster	Porsche 936 C	Porsche	3748* S. Brunn/E. Schuster
70. Spice Engineering Ltd	Spice Pontiac Fiero	Cosworth	3300 Spice/R. Bellm
72. John Bartlett Racing Ltd	Chevron B 62	Cosworth	3300 X.../X...
73. Gebhardt Motorsport	Gebhardt	Cosworth	3300 X.../X...
75. A.D.A.	Gebhardt JC 843	Cosworth	3300 Arrower/E. Clements
78. Ecurie Ecosse	Ecosse	Cosworth	2996 Mallock/M. Wilds
79. Ecurie Ecosse	Ecosse	Cosworth	2996 Leslie/X...
80. Carma F.F.	Alba Carma F.F.	Carma F.F.	2681* Finotto/C. Facetti
82. Grifo Autoracing	Grifo 862 C	Cosworth	3300 X.../X...
83. Luigi Taverna	Alba	Cosworth	2993 Laverna/M. Sala
89. Martin Schanche Racing	Argo	Zakspeed	2590* Schanche/B. Drystad/T. Kleppe
91. P.C. Automotive	Royale R.P. 40	BBM Mitsubishi	2798* Piper/Brodie
92. Louis Descartes	Ald	BMW	3500 Descartes/J. Heuclin
93. Miguel-Georges Baudouin	Ald	BMW	3500 Dupuy/P. de Thoisy/L. Robert
94. Roland Bassaler	Sauber C6	BMW	3453 Bassaler/D. Lacaud/Y. Tapy
95. Roland Bassaler	Sauber C6	BMW	3453 X.../X...
96. GKW Motorsport	GKW-Porsche	Porsche	3300 Touroul/Th. Perrier/Ph. Dermagne
98. Roy Baker Racing Ltd	Tiga Ford	Cosworth	3561* Sheldon/N. Nicholson/R. Baker
99. Roy Baker Racing Ltd	Tiga Ford	Cosworth	3561* Dain/D. Andrews/M. Hall
100. Secateva	VM	Peugeot	3710* D. Raulet/P. Pessiot
101. Graff Racing	Rondeau M 482	Cosworth	3298* Ph. Grand/X...
102. Lucien Rossiaud	Rondeau M 379	Cosworth	2999 Del Bello/L. Rossiaud
104. Jean-Claude Ferrarin	Isolia 002	Cosworth	2995 Ferrarin/H. Striebig
104. Kelmar	Tiga	Cosworth	3561 Barberio/J.P. Frey
106. Strandell	Strandell Porsche	Porsche	3300 Lellberg/K. Leim/B. Traedgaard
SPORT			
111. MK-Motorsport	BMW M1	BMW	3490 Frankenber
IMSA GIP			
115. Richard Cleare Racing	March/Porsche	Porsche 962	3998* R. Cleare/X...
116. Cosmik Racing Promotions	Cosmik March 84 G	Porsche 956	3710* C. Los/X...
117. Mazdaspeed Co. Ltd	Mazdaspeed	Mazda	2727 D. Kennedy/P. Dieudonné/M. Galvin
118. Mazdaspeed Co. Ltd	Mazdaspeed	Mazda	2747 Y. Katayama/Y. Terada/T. Yorino
IMSA GTX			
120. Porsche AG	Porsche 961	Porsche	3990* X.../X...

* Turbo engine

THREE FERRARIS FOR INDY?

During the presentation of the latest Ferrari F1 car, the Commendatore outlined his plans for Formula CART/Indy and confirmed that a new chassis is in the process of being designed specifically for the North American series. It would appear that the motor will be a turbo-charged 2.65 litre V8 and Enzo announced that he would would like to see two, if not three Ferraris at the start of the Indianapolis 500 in 1987 with at least one Italian driver (De Cesaris?). Rumours that Ferrari were going to join forces with the Hass/Newman team, who use the services of a certain Mario Andretti, were denied.

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PONS BACK WITH MOUTON

Fabrizia Pons, the famous Italian co-driver and traditional partner of Michèle Mouton, will be back in action on the Tour of Corsica despite her decision to withdraw from Rallying following her marriage at the beginning of the year. Fabrizia accepted the French lady's invitation to navigate in the factory entered Peugeot 205 Turbo 16.

DELAYED CITROEN

After withdrawing their entries for the Rally of Portugal and then the Safari, Citroën have announced their intention not to take the BX 4TC to Corsica either. Realising that the cars of Jean-Claude Andruet and Philippe Wambergue have little chance of being competitive on their home event, the French manufacturer prefers to concentrate its efforts on preparing for the Acropolis in Greece at the beginning of June.

4WD NISSAN

The Japanese Rally champion, Masao Kamioka, will be trying out a factory prepared Nissan Sunny on the Lucky Strike Rally which takes place in Malaya shortly. The new car will be the first Nissan rally car to boast four-wheel drive. From the exterior, the Nissan ressembles the little front-wheel drive Sunny. The front mounted engine will be a 1.8 litre, 16 valve turbo derived from the Silvia coupé and will be transversely positioned. The central differential forms an integral part of the gearbox and is situated to the left of the engine.

FISA ANNOUNCES GROUP S GUIDELINES

At last, a concrete indication has been given by FISA concerning the technical regulations for Group S Rally cars which will be introduced in 1988. Maximum power output will be limited to 300 bhp, maximum engine sizes being 2.4 litres for normally aspirated engines and 1.2 litres for turbo charged engines whose power will be limited by restricting air-flow to the turbo as used with success in F3. Overall dimensions will be limited and only 16 inch diameter wheels may be used. The total width for the front and rear tyre on any one side may not exceed 18 inches. With a minimum imposed weight of 1000 kg, power to weight ratios will have been cut near enough in half in one fell swoop.

NO FORDS IN CORSICA

Stuart Turner and Peter Ashcroft have decided not to enter the Ford RS200 for the Tour of Corsica on the grounds that their 4WD car still requires development before it can be competitive on tarmac. Like Citroën, the British-based team will be putting all of its energy into preparing for the Acropolis.

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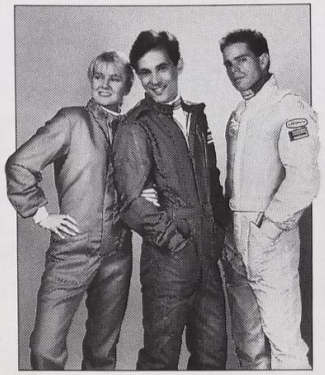

Picture shows a selection of one and two-layer Leconte Racesuits made from Nomex III.

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Outfitters to Motorsport Competitors and Support Crews

Graffiti

March was a month to make members of the motorsport press look, for once, like reasonably useful citizens. Nelson Piquet generously complied with all our predictions by waltzing off with the Brazilian Grand Prix at a pace which left the opposition wide-eyed and gasping, while on an altogether sterner scale in Portugal rallying suffered the disaster which has been forecast for it by virtually every motoring journalist who can read a caption under a photograph.

The dozens of journalists who made the trip to Rio for the GP, most of them Italians, were disconcerted to find that although Nelson spent quite a long time chatting away in Portuguese in the post-race press conference, no sooner had he finished that than he was whisked away to be grilled by the telly-men. That left the spaghettis without the first person Piquet quotes for which so many editors had shelled out air tickets and expenses.

A supplementary press conference was therefore laid on in the Inter-Continental hotel next morning, when Nelson revealed, among other things, that he was confident throughout the weekend of his car's superiority. We knew already that he is not exactly a Senna fan, and there was one aspect of the race which seemed to have given him special pleasure.

As you will have read in Mr Harrap's report on another page, Senna, from pole position, had taken the lead at the start and successfully defended it half way round the first lap against the over-eager Mr Mansell in what can only be described as a firm, no-nonsense manoeuvre. The ensuing accident ended satisfactorily for Senna, with no harm to his Lotus, while Nigel found himself floundering in the boonies for the second consecutive year in Rio. (Nigel describes it differently).

On the following lap, rushing past the packed grandstands overlooking the main straight at a speed which can't have been far short of 200 mph, Senna gleefully stuck his left fist in the air. Asked if he had seen the gesture from where he was sitting on Senna's tail, about 50 metres behind, Piquet said he had. What did he think it signified?

"Oh, I wondered about that too," he offered, *"and then I realised that Senna thought it was me he'd pushed off, not Mansell. I think he must have had a little shock when I drove past him on the straight a couple of laps later..."*

* * *

Understandably, the race debut of the BMW-engined Brabham BT55s was somewhat overshadowed in Rio by the Piquet/Senna confrontation. This was good news for the motor-noters who had anticipated a short race for the two blue skateboards, because one of them (De Angelis') struggled home in 8th place, albeit after a series of incidents. Elio has a reputation for losing interest in his cars rather quickly when they're not running right, but his enthusiasm for the BT55 remains undimmed.

At present, the most worrying shortcomings of the kipper car are its reluctance to rev and a lack of straight-line speed. In qualifying trim, with what even Piquet describes as the most powerful turbo of the lot, the best that Elio and Rick could do against the likes of Senna through the speed trap on the short straight in front of the pits was a good 15 mph (or 10 per cent) slower.

The "lie down" BMW engine is quite a lot different from the regular "stand up" version supplied to the Arrows and Benetton teams (it has a specially cast iron block, for example), and one theory is that Bosch have a bit more work to do in order to find a suitable chip for the electronic engine management system.

A second theory attributes the comparatively lethargic pick-up of the Brabham's engine to the facinating MRD/Weismann transverse gearbox, which is full of large pinions designed to very close tolerances. It has been speculated that the gears act as flywheels, and no doubt there will be back-to-back bench tests with last year's Hewland to check this. Too bad if the theory is right, because the lie-down motor won't work with the old box.

De Angelis had a fright on lap 18 when his front left wheel fell off without warning just after he'd lost 7th place to Laffite. He trundled back to the pits on the three remaining wheels for a replacement, astonishing even designer Gordon Murray with how little damage the underside of the monocoque had sustained, and quickly picked up speed again.

It turns out that Brabham had a dud batch of left front wheel nuts which had been incorrectly machined (by ten thousandths of an inch, or about a quarter of the thickness of a hacksaw blade), so the mechanics can't be blamed for not tightening up the nut. But when they went to collect the BT55 from post-race scrutineering in parc ferme it was their turn to get a shock. The left front wheel again parted company from the car as it was being pushed down the pit lane...

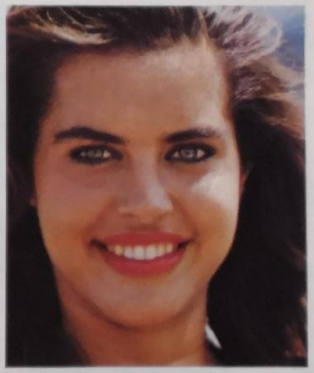
* * *

Rio de Janeiro seemed an awfully long way to go to be told about the Formula 3000 Birmingham "Super Prix" which the Second City will be staging through its streets on August 25th. Birmingham is also a candidate for the 1992 Olympic Games, and the people there seem very determined to beat off Barcelona and Brisbane for the honour of staging them, with the street race as a little taster to concentrate attention on the place.

At a time when the city fathers of Brum decided to tell the world's Press about their plans for the race and the games, it probably seemed like a good idea to make the announcement in Rio, where many of us were gathered for the first of the Grands Prix of the 1986 season.

Having missed the conference itself because we were on a plane, Mr and Mrs Graffiti arrived in the Rio Sheraton to find a small party of slightly bewildered Brummies in the lobby, looking self-conscious in Super Prix tee-shirts, all flat vowels and round bellies. At their head was Dennis Howell, one-time Minister for Sport under Labour, and a man whose perfectly pear-shaped anatomy suggests insufficient practice of his former ministry's own preaching.

One of Mr Howell's party turned out to be Deputy Chief Constable of the West Midlands. He was taking a lot of predictable banter about having come to collect escaped train robber Ronnie Biggs but he claimed to have come to study



by Mike Doodson

Brazilian traffic conditions. After seeing the way the locals drive back from the track, the poor bloke now has no alternative but to go home and announce that British motorway madness is very tame stuff indeed.

Looking around the pressroom at the Jacarepagua circuit, one of the Birmingham gents wondered whether the Super Prix would attract as many jounalists from as many different countries as the Brazilian GP had done. The answer, alas, is no. Firstly because the Birmingham race isn't going to be a World Championship Grand Prix, and secondly because approximately half of the pressmen pounding typewriters and shouting into telephones in Rio were South Americans whose papers and TV stations can't afford to send them to Europe.

The owners of the two British circuits which share the British GP, incidentally, are not about to stand for any nonsense from Birmingham over the city's original hopes to stage a World Championship F1 race. Our own RAC has therefore been prevailed upon to declare that there will be no Grand Prix, hence the gussied-up "Super Prix" terminology and a restriction to Formula 3000.

Nevertheless, a lot of people have put an amazing amount of effort into the BSP, which deserves to succeed.

* * *

At any Grand Prix you will find that a contingent of journalists, including this one, have wangled their way into the TV boxes as spotters, lap charters and assistants to the commentators of their various countries' television stations.

Normally, this is a reasonably effortless way to watch the race and to see exactly what our readers will be seeing on their screens at home. It was with some trepidation, however, that our little party fought its way to the BBC booth at the back of the main Rio grandstand, for Goodyear had announced that some of its teams were planning two pit stops.

As any budding lap charter will tell you, the pit stops can make it fiendishly difficult to keep track on the race, especially when there is a joker in the pack (at Rio it was McLaren) who is planning to steal a march on the others by making only one stop.

Fortunately for the lap charters, for several years now there is always a little supplementary TV screen in our boxes, provided by Olivetti-Longines, which carries up-to-date information on the race situation, culled from their super-sophisticated official scoring system, using transmitters mounted on each of the competing cars.

At some stage in the last half of the race, however, the reassuring information vanished as our little screens went horribly blank. Murray Walker and James Hunt, who for technical reasons were doing their Beeb commentary "remote" from Shepherd's Bush, were probably unaware of this glitch, for which we were cursing Olivetti-Longines.

Afterwards we discovered that the Brazilians, who have a peculiar mix of North American (110v) and European (220v) electrical systems across the country, had managed to feed 180 volts into one of the computers which had been set up for 110v. But then Brazil is like that: Always unpredictable, and sometimes you get rather more than you expect, as some of my mechanic friends have discovered over the years. That, however, is entirely another story...

* * *

One of President Jean-Marie Balestre's minions at FISA insists that the attitude of this column towards his boss is nothing less than "malicious", which at least gives me the opportunity to thank him (the minion) for reading it. The trouble with J-MB is that he leaves himself open for criticism and ridicule, almost as if he was inviting mischievous columnists to use him as a target.

He was at it again in Rio, calling a press conference for local journalists at which he revealed the hitherto undisclosed news that in future no GP-organising country would be permitted to alternate its F1 race between two circuits.

Our President declared that the decision — reached unanimously in January by the entire membership of the Formula 1 Commission — had been accepted by the organising clubs of all the relevant countries, *"with a view to satisfying sponsors, reducing the circuit owner's investment and improving safety."*

Accordingly Belgium has nominated Spa as its permanent GP venue and Germany Hockenheim, leaving Zolder and Nurburgring with nothing in their corporate hands but a handful of unpaid rebuilding bills.

It was only after a question from the floor (guess who asked it!) that Monsieur le President would comment on the situation in Britain, where Silverstone and Brands Hatch have happily shared organising duties in alternate years since 1964. *"The Matter,"* said Balestre, *"is under discussion."*

Now Balestre doesn't travel alone, not even to expensive destinations like Rio, and one of his aides later dashed up to say that the choice between Silverstone and Brands was the responsibility of the RAC Motor Sport Association, not of FISA. Moments later, the aforementioned minion corrected his colleague's explanation by saying that Britain was a "special case" and would not after all have to make a choice, "because you are an island".

Maybe this situation will be deemed to lapse when the Channel Tunnel is built. Meanwhile, protect us from bureaucrats with double standards and multiple minions.

There was another incident in Rio involving local politics, after which FISA issued a statement to the effect that the prestige of the World Championship had been "gravely prejudiced". Since not one of the journalists in the overheated press room had been aware of any problem until the moment when FISA issued its comunique, Graffiti's theory is that M Balestre himself was responsible for the prejudice.

Next month we'll report on progress, if any. But then, I suspect that our leader will have found a few more windmills at which to tilt. With the Rally of Portugal enquiry about to be completed, he probably needs something to take his mind off reality.

GERHARD BERGER

BERGER'S IN BUSINESS

AS ONE AUSTRIAN BIDS FAREWELL TO GRAND PRIX RACING, SO ARRIVES ANOTHER. GERHARD BERGER, WHO FINISHED HIS TWO FINAL GPS OF THE 1985 SEASON IN THE POINTS, STARTED THE 1986 SEASON IN RIO WITH A POINTS-SCORING RESULT FOR THE RE-FORMED BENETTON TEAM. BUT HE HAS MORE THAN A COUNTRY IN COMMON WITH NIKI LAUDA: HE HAD A HORRIFIC ACCIDENT WHICH NEARLY CUT SHORT HIS CAREER BEFORE IT HAD BEGUN...

by Mike Doodson

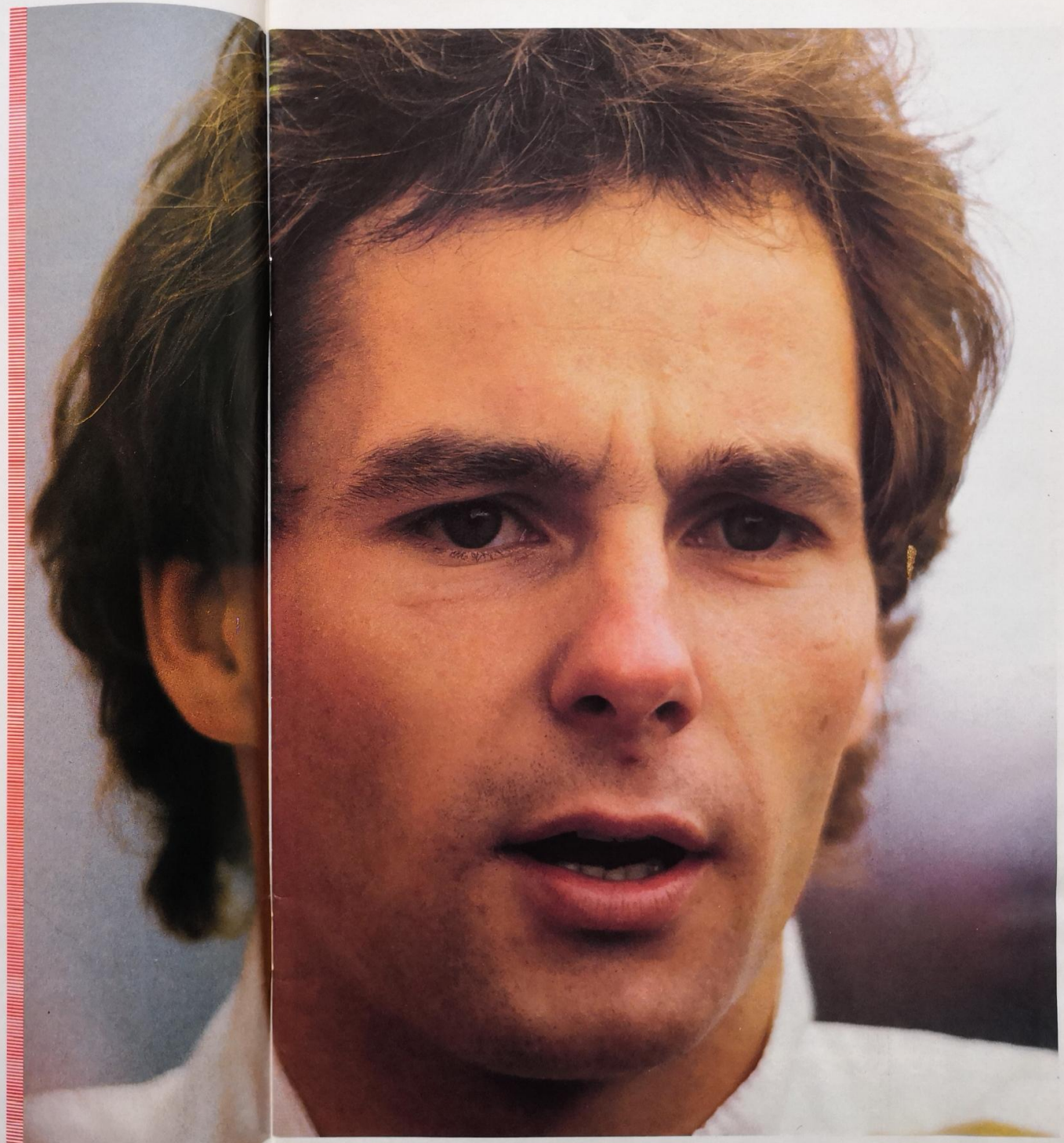
Imola, 1981. Watching Ferrari drivers Pironi and Villeneuve dominate the rather thin field of "legalist" cars competing in the celebrated San Marino Grand Prix is a 21 year old Austrian named Gerhard Berger.

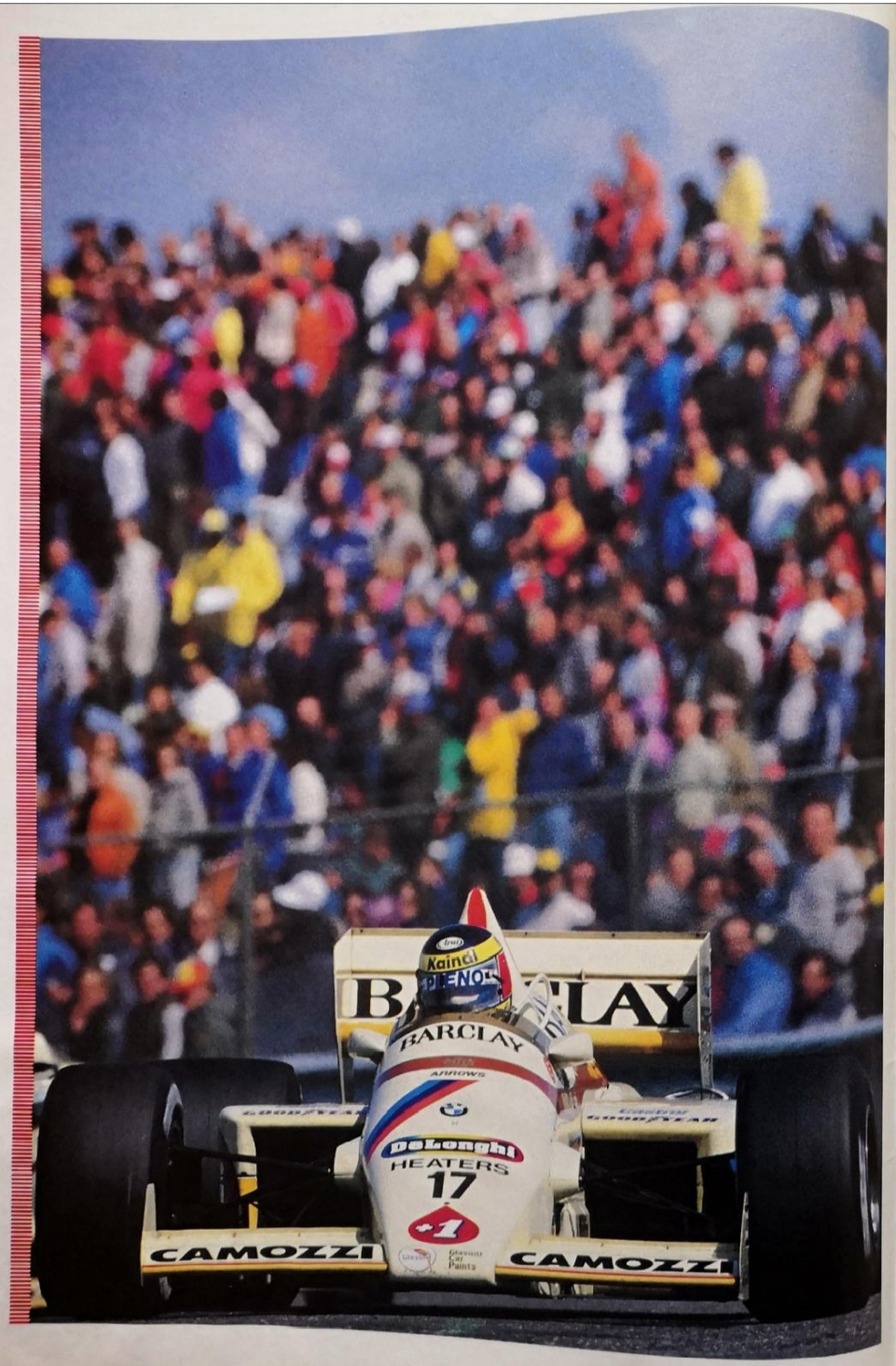
He himself has trailered his battered self-prepared Alfasud from his home in Worgl, near Innsbruck, to compete in the Alfa Romeo sponsored supporting round of the Alfasud Cup. Watching at the Tosa hairpin at the end of the long pits straight, Berger's eye is caught by the late braking of Tyrrell driver Michele Alboreto. *"I thought he must have been completely crazy,"* recalls Berger. *"I never wanted to be in a car like that."*

Five years later in Rio, Berger was destined to be driving his Benetton-BMW in a brief battle with Alboreto's Ferrari. The Austrian's car lasted longer than the Ferrari, too, and he collected a World Championship point in his first race with the re-formed British team.

Looking relaxed in a yellow tee-shirt and blue shorts, Gerhard was waiting to be interviewed for GPI the following morning in Rio's delightful Inter-Continental hotel.

We walked together to the side of the swimming pool, where some of the German language journalists were writing late news stories to meet European deadlines. They acknowledged him, obviously pleased that someone has come along just in time to take over the halo previously worn by Niki Lauda. And he clearly deserves it.





He is slim, well-muscled and — at just under six feet — says he's too tall for Formula 1. It took a lot of work to get him even moderately comfortable in the car built for "Droopy" Fabi. His hair is dark and curly, already receding at the temples, and there is a slight cleft in the strong chin. The symmetrical white teeth somehow don't fit the gruffness of the Austrian accent which we'd got used to from his countryman these many years. Under the tan, though, the feature which grabs attention is the neat scar running right across the throat from just under one ear to the other. It is the legacy of an accident in January 1985 which nearly paralysed him and might easily have killed him.

"It happened after (F3 entrant Pino) Trivellato called me, it was a Sunday and he wanted me to come to test at Misano the following morning. I was driving from my office to my home: It's only three kilometres, and I wasn't wearing my seat belt. Maybe I was going a bit quick, but not so much.

"Some guy who'd been drinking drove out of a side road. He hit the rear of my car and sent me spinning. I went over a bridge, got thrown out, and broke my neck and several other injuries. The car was right above me, there was petrol coming out, and I was very worried."

Not for the first time in his life, Gerhard was destined to have what can only be described as pools winner's luck.

THE CAR WAS RIGHT ABOVE ME, THERE WAS PETROL COMING OUT AND I WAS VERY WORRIED

"The incredible thing is that the next car along belonged to two German doctors from Munich who were specialists in helicopter accidents. They knew exactly what sort of injuries I had, and when the ambulance came they told them not to put me on a normal stretcher, they made the ambulance people go back and get a sort of air bed, so that no more damage would be done to me.

"When the doctors in Innsbruck saw the X-rays of my neck, they told me that if my spine had been moved one millimetre more, I would have been paralysed from the neck down, maybe dead. They said I would have to spend five months in bed and another three months to start walking again. I knew that if I didn't get into Formula 1 again in 1985, then I would never get a car again. I said they had to do something to help me."

At that point in his career, Gerhard Berger's racing experience comprised a handful of amateur races in the Alfasud Cup and some good F3 results spread across three seasons in the German and European Championships. In all, it added up to no more than 40 races.

But he also had four Grand Prix starts behind him with the Anglo-German

ATS team. He had made his debut in August 1984 at the Osterreichring, in his "home" Grand Prix, achieving the rare feat of bringing a notoriously unreliable car safely across the finishing line.

Three weeks later at Monza, he not only finished a race but also scored a point, the first for ATS since 1982. BMW *Rennleiter* Deiter Stappert, a fellow Austrian, was pushing hard to get him a place at Arrows, and his career was about to take off.

The doctors considered the case. Finally they agreed to an extremely risky procedure which involved an operation from the front of the neck to insert a plate and secure it to the broken bones using four screws. Even so, they told Gerhard that he would have to spend a minimum of five weeks in bed, wearing a special collar to minimise any movement.

"On the day after the operation I was lying in bed. Two friends had come to see me, so I asked them to help me get out of bed because I knew the muscles and the blood circulation would not be good enough for racing if I had to stay like that for another five weeks. They helped me out for a few seconds, and I remember that everything went black in front of my eyes. But we did it again two or three times that day.

"The next evening I found that I could walk a little bit, and I went out of my room. The doctor who had made my operation was there, and he walked past me. Then he turned round, realised it was me, and made me go straight back to the bed. But he came back after 20 minutes to say that the other doctors didn't believe what he'd told them about me, so would I please do it again. I think there must have been about 15 doctors there to watch it.

"I did it every day for three days, and then I said to Rosi, my girlfriend, that I wanted to leave the hospital, because I could do everything at home that I was doing there. The doctor said I was completely crazy, but he also told me that it was my responsibility, and if I signed the release papers there was nothing they could do to stop me.

"So I left: It was Friday, less than one week after the operation and that evening, for the first time, I took a car and went down to the discotheque to meet some friends, even though I could not move my head to left or right."

Gerhard Berger is the son of a successful Austrian businessman who has a number of trucking companies and car dealerships through Austria, Germany, Luxembourg and Italy. Gerhard himself always intended to be in the same kind of work, and he was still at school when he started to earn spare cash by buying written-off cars in Germany (where there are very strict rules about selling repaired cars) and fixing them up for sale in Austria.

THE DOCTOR WHO HAD MADE MY OPERATION WALKED PAST ME. THEN HE TURNED ROUND, REALISED IT WAS ME AND MADE ME GO STRAIGHT BACK TO BED

"I always had a very good relationship with my father and my mother. The only problem between us came up because I wanted to go racing, and at the beginning they tried everything possible to stop me. When I was 15 or 16 I told them I wanted to go kart racing, but they refused to give me money. So I had to work for the money. I was only 14 years old when I started selling cars. When I had made enough profits, I bought the Alfasud for the Alfasud Cup. That caused a big disaster at home I can tell you."

Because he himself had never seen any commercial future in racing, Gerhard lost little time after leaving school to get himself set up in business with the help of his father. *"By the time I was 18 or 19 years old I was already driving his trucks and helping him. I have done everything: Even working in the office and learning book-keeping.*

"But I didn't want to depend on him always, and when I was 20 years old he bought a small firm in Kundl, ten kilometres from Worgl, which had run out of money. There were ten people working there, five or six trucks, and my father said that I could have the place on condition that I worked there.

"It was at exactly the time that I started to go racing, but my father was so upset about me racing that he refused to look after the business. He told me that if I insisted on racing and didn't concentrate on work, then I would be finished within half a year. When I had to go to a race at the weekend once, for practicing, I asked him if he would keep an eye on my place on Friday, but he refused. He just smiled and said that I had to decide which I wanted to do.

"But then I discovered a girl called Helga Ellinger who was working for another company like mine: Everyone said she was fantastic, and I thought that I would get her to work for me, because I needed someone to look after the place when I was racing. So she joined me, and in two or three years of working together we went from 6 trucks to 25 trucks, from 10 employees to 60, so it's worked out perfectly."

WE NEVER HAD MUCH MONEY: WE DIDN'T DO ANY TESTING AND QUITE OFTEN WE ALSO MISSED THE OFFICIAL PRACTICE

Some good results with the Alfasud in that first year (1981) encouraged Alfa Romeo Austria, together with Autodelta, to help Gerhard to go into Formula 3, competing in the German Championship.

But his savings were soon gone, indeed, Gerhard found F3 so tough that he already decided to give up racing altogether when he had yet another stroke of good fortune. *"I couldn't find sponsors, I had no press, and although I had some good races in Germany, no one was looking for me. Then Helmut Marko saw me in a race at Hockenheim, a very tough race and I think I touched other cars at least ten times."*

Marko is an Austrian lawyer who had been one of the best sports car drivers racing in the early '70s. But his promising career in Formula 1 was cut short in 1972, when a stone was thrown up and he lost an eye while racing a BRM at Clermont-Ferrand in the French GP. He has never lost contact with racing, however, and Berger was not the first talented Austrian to be given his help. With Marko finding most of the money, they bought Dick Bennett's old Ralt RT4, the Mansilla car from 1982, and set up a team for the Euro-Series.

"I finished 2nd in Austria and also at Knutstorp, with a lot of help from my English mechanic, whose name is Derek Warrick. Marko ran the team and all I had to do was drive the car and find a few sponsors. But we never had much money: We didn't do any testing, and quite often we also missed the official practice on Friday. We didn't even have reverse gear, because we couldn't afford a lot of gears.

"But I learned so much that year: It didn't matter not having reverse gear, the important thing was that I learned the politics. Marko taught me how to work at being a professional racing driver, which for me was much more valuable than having reverse gear or going testing..."

He had been quick enough in 1983 to attract the attention of Trivellato, who pestered Gerhard to drive his Alfa-powered F3 car, in spite of his lack of sponsorship. The opposition in 1984 included John Nielsen and Johnny Dumfries, both of whom had the fast-improving VW engine, not to mention Ivan Capelli.

"With Trivellato I think I did 16 races, and I finished 15 times in the first four places and 7th once because of a seized rear wheel bearing. I was 2nd in Monte Carlo, and I won in Austria and at Monza. That for me was a perfect team.

DIETER STAPPERT WARNED ME THAT THE CHANCES OF GETTING INTO F1 WERE SMALL

"Capelli beat me at Monte Carlo, but later in the season the Italian scrutineers had a look inside his engine, and they found that there was air coming in where it shouldn't. We noticed it at some races, because I thought that we had good engines, but when Capelli passed me it was every time on the straight. At Silverstone I couldn't even pass him by using the slipstream: I could get level with him, but never pass him.

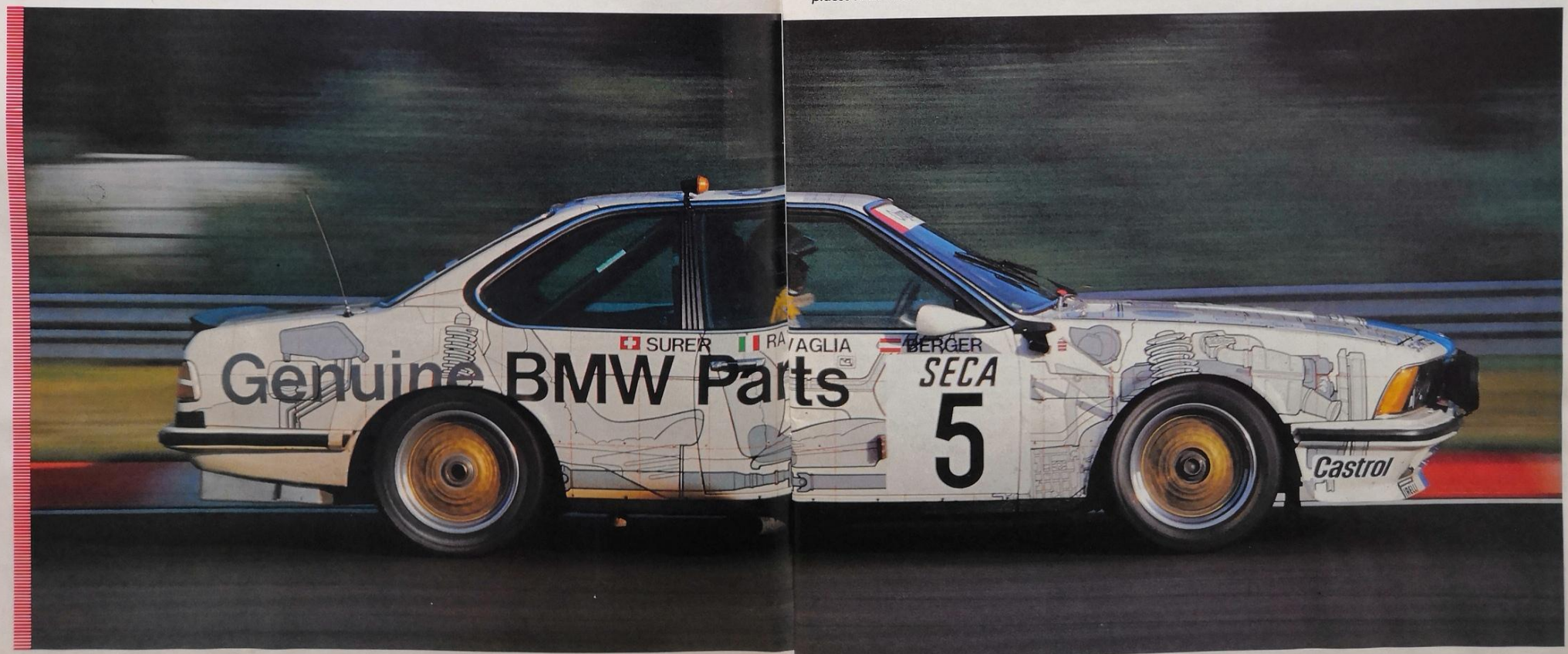
"It was at Monaco that Trivellato told me first time that there was something wrong with Capelli's engine, because he noticed how fast he had gone from the start to the first corner. At Monza Capelli was pulling out 20 metres on everyone coming out of the first chicane. At Monza Trivellato insisted on protesting after I came second — and they found that his car was not legal. It was a pity because Capelli is a very good driver, and he won more races in F3 even after the Monza thing.

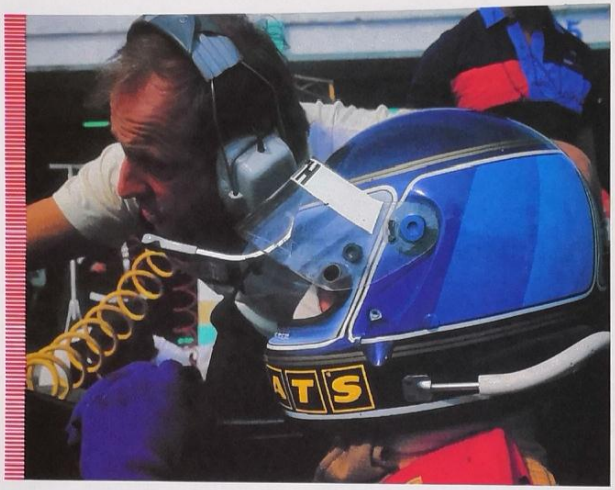
"So in Formula 3 Helmut taught me how to be a professional, while in the second year I got the material. In 1984 I was lying 2nd in the Championship, and I could have won it, but then I started to do Formula 1, which meant missing some races."

The next stroke of luck was an encounter with yet another Austrian.

"At the end of '83 I happened to meet Dieter Stappert, who was in charge of BMW motorsport at the time. He had noticed me driving quick. He warned me that the chances of getting into F1 were so small that I should not think of it. At that time I hadn't even considered the idea, I was happy to be in F3, and if I won I would think about going on, maybe to Formula 3000.

"So I went into Formula 3 with Trivellato, and at the same time I had my first





contract with BMW for saloon cars. In the first race with the C saloon car, at Monza in the rain, I was leading for the first third of the race, so they (BMW) were very happy. I had a very good relationship with them after that.

"If I hadn't had BMW, I would never have got into Formula 1. I had a friend who knows Gunter Schmid (of ATS) very well, and we went to see him together. He said it would be possible for me to drive for him because all the other teams had two drivers. Manfred (Winkelhock) complained that the car was bad, and he wanted to find out if the problem was with the driver or the car.

"It was wrong for people to think that Schmid didn't like Winkelhock: He just wanted to have two cars, like other teams, to see what was happening. Schmid then told me that he could build a second car, but he didn't have enough engines for it, I would have to go and see BMW. So I went to see BMW, and Paul Rosche, at his suggestion and they said they would give me the engines, but I had to find sponsors to pay for the rebuilds. And I got some engines for the Austrian GP.

I AM VERY SORRY FOR GUNTER SCHMID, HE SHOULD STILL BE IN F1

"I knew that the ATS car often stopped with little technical problems, so I guessed that maybe preparation would be a problem. Since my car wasn't yet finished, I got two mechanics, including one who had worked on Helmut Marko's BRM in 1972 and they went to England to finish the car there. It was very important, because I finished that first race: Without them I would not have done so, I know.

"For me that was fantastic. It was a car which could qualify easily: I was 18th in the first qualifying. I had read all the stories about Schmid, about the difficulties which other people had had with him and how he couldn't get mechanics. But he has put a lot of money into F1 and... well, we need people like him in racing. The car wasn't bad: I am sure there are other cars which are not as good as the ATS. I am very sorry for Schmid, he should be in F1."

But with the ATS about to be given the thumbs down by BMW for engines in 1985, Gerhard had to look towards his future. Arrows, who had negotiated to buy BMW engines, seemed a logical target.

"At Monza, my second Formula 1 race, I went to see Jackie Oliver at Arrows. He told me he would like to replace Surer with a young driver. Then he asked me how much money I had, and I told him I had nothing. He said, 'OK, you'll hear from me.' We spoke quite a lot later, but then I had my big accident.

"I think it was only two weeks after the operation that I got into a plane for London to go and see Oliver. I had been wearing this plastic collar to support my neck, and I was supposed to wear it for two months because the only thing holding my head up was the neck muscles and the plate. If he had seen me with the collar, though, Jackie would have thought that I wasn't going to be able to do the first race."

After some complicated negotiations, including a big Austrian sponsor who turned up out of the blue and then vanished just as quickly, Gerhard was to get the Arrows place alongside Thierry Boutsen.

"But I needed to drive as soon as possible, so I telephoned my friend Chuck McCarty, who has Formula 3 cars, and I made an arrangement to test with him at Misano. My head felt terrible, but I did a good time.

"When I went to Imola for the first test with the Arrows I could only do two laps at a time: I kept coming into the pits to complain about all sorts of little things, making the mechanics check if the battery was loose, things like that."

Nevertheless, the 1985 season was to work out reasonably well for Gerhard. His neck rapidly improved and his ability often enabled him to out-qualify Boutsen. However, the team's lack of budget severely restricted the development of the A8 chasis. Its preparation was second to none, though, and Gerhard's two best results — in the last two races — were 5th at Kyalami and 6th at Adelaide.

Peter Collins of Toleman had told him at Monza that he was on the short list for the new Benetton team in 1986. Although he was never seriously worried about losing the drive, there were stories about pressure being applied on behalf of Eddie Cheever. Indeed, it was not until February that the contract was confirmed.

The first opportunity which Gerhard got to sit in the new Benetton B186 was at the second Rio test. His height and his big feet made it physically impossible for him to drive. The Brazil result was especially encouraging considering that he had had virtually no testing throughout the winter.

MY GIRLFRIEND IS NOT INTERESTED IN RACING, WHICH IS GOOD. WHEN I GET HOME IT IS A COMPLETELY DIFFERENT ATMOSPHERE

The family disagreements have now been ironed out. Father is reconciled to his son's racing, and he even keeps an eye on Gerhard's business when he's racing. Nevertheless, although Gerhard spends as much time as he can afford in his office, he finds that most of his time is now occupied with racing matters.

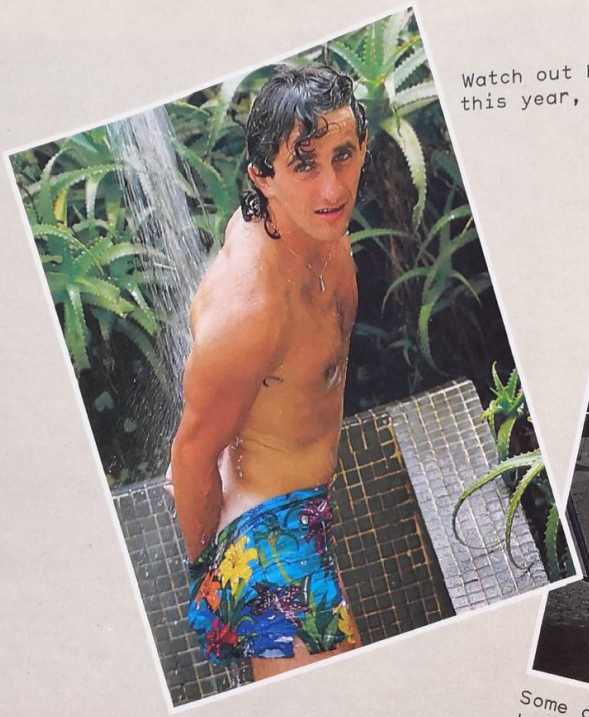
"I don't think they need me so much now," he confesses. *"I spent more time away from the business last year than ever before, and it was our best year ever."*

He and Rosi are content with their life in Worgl, though they are still unmarried.

"She has been my girlfriend for seven or eight years, since before I was racing. We have a daughter, Christina, who has her sixth birthday this May. Rosi is not very interested in racing, which is good, because it means I can talk all week about racing, but when I go home it is a completely different atmosphere. I am happy like this."

At the rate he's going in racing, it seems that it will be a long time before Gerhard will be going back to business full-time. ■

POSTCARD



Watch out behind you this year, Alain.

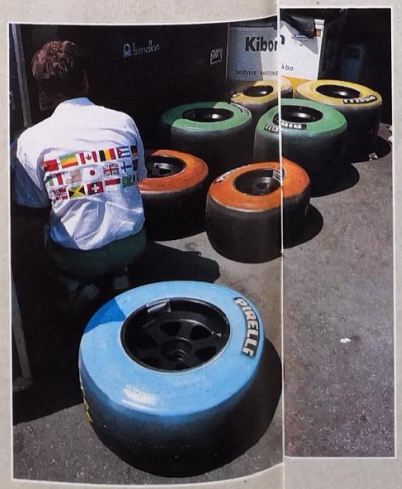
For the local spectators, it didn't matter who won.... as long as it was a Brazilian.

The Rio organisers have found a way of ensuring that drivers respect the pace-car.

Some days you got the feeling you were beside the boating lake in a typical British summer.

A soft-top race was laid on as a curtain-raiser.

Rio



If it doesn't move Benetton paint it.

HONDA-PIQUET A WINNING COMBINATION

HOW ELSE CAN YOU DIFFERENTIATE THIS GP FROM ANY OTHER THAN BY UNDERLINING THE DOMINATION OF ONE DRIVER AND ONE ENGINE? IF THERE WAS STILL ANYBODY THAT HADN'T UNDERSTOOD THAT THE WILLIAMS WERE GOING TO BE THE ONES TO BEAT IN '86, PIQUET'S BRAZILIAN WIN WILL PROBABLY HAVE PUT THEM RIGHT.

by Bob Harrap

ANALYSIS

Seeing Nelson Piquet out in front of the first Grand Prix of the season gave the feeling that the driver, chassis and engine were as one out there under the Brazilian summer sun. The way the former World Champion dominated his opponents with such apparent ease and arrogance was a perfect example of what happens when you combine the best driving talents around with the most suitable machinery of the moment. During the race, the other teams were able to see exactly how much ground they have got to make up to get even with the Williams-Hondas. The major question that faces the competition now is how many Grands Prix the Honda engined cars are going to win before the rest catch up. If they catch up!

The worrying aspect of this result is that some of our worst fears have come true. Many predicted that F1 grids would become technically unbalanced. It has happened and the rift between the best and the least well equipped teams is wider than ever. Equally alarming was the lack of interest that the race offered to the spectating public, an aspect which must not be neglected if the sport is to continue to thrive. Which of the 25 starters at Jacarepagua had the intention of competing in a Grand Prix worthy of that name? Senna? Possibly, but only until the petrol gauge told him to slow down. Arnoux and Laffite? Their eyes were riveted to the onboard computer from the green light until the finish. Apart from the traditional jockeying for positions on lap 1, everybody was totally concentrated on following their race instructions to the letter, limiting turbo-pressure and engine speeds. If there was a driver out there on the circuit who, in a flash of inspiration, had any thoughts of making a concerted effort to catch up with someone, then he immediately came face to face with the reality of having to conserve fuel. Thanks to FISA's rulings, we witnessed ten drivers crossing the finish line after 306 km, having used only 195 litres of fuel. You call that racing? At one time, any driver that consciously slowed and refused to join battle would have had his licence taken from him!

But let us leave that debate for the time being and let's try and remember purely the positive and pleasurable points of the Brazilian GP: Piquet's imposing, if predictable victory, the joy and strength it must have given to Frank Williams, the heart-warming Brazilian one-two of Piquet and Senna, and the encouraging third and fourth placings of Laffite and Arnoux.

Out in front, Piquet had a remarkably eventless race, taking the lead on lap 3 and perfectly controlling the proceedings until the finish. Only twice did he lose his lead and both occasions were due to planned tyre changes. In fact, his domination of the race was so complete that he could have stopped every ten laps and still have won. *"Today has been very moving for me"* he admitted after the race. *"I wanted so much to win this one for Frank. I don't think I've ever worked as hard during practice."*

Piquet's start was a little hesitant. *"When I saw that Mansell and Senna were side by side, and prepared to go into the first bend together, I decided to lift off. Apart from that, I had no problems whatsoever. I agree that it's not very interesting though racing like that. Let's say that I won because the other teams aren't ready yet. For the moment, my only opponent is my team-mate, Nigel Mansell, but we mustn't allow ourselves to get over-confident, the other motorists won't be slow in reacting."*

Mansell may well be Piquet's number one challenger, but the British driver hit trouble in Rio when he tried to get past Senna on lap 1... *"I had managed to draw level with the Lotus on the inside of the bend. I could have got through but he forced me off. I prefer not to say anything else for the moment, I might regret it later. All I can say is that I've nearly lost count of the number of times Senna has tried, or managed to make me go off!"*

Senna's after race thoughts were those of a potential champion that knows he hasn't the means to win. *"There was nothing I could do against Piquet,"* admitted the young Brazilian. *"I only saw him twice during the race and that was when he overtook me like a rocket. When a driver starts a race, he generally has the intention of doing his best. It's extremely difficult, however, to have that conviction when you know perfectly well that you haven't got the car to do so. Towards the end, I caught sight of Nelson but I knew perfectly well what would have happened if there had been two more laps to the race. As soon as I got anywhere near him, he would have accelerated away and I would have been left with no fuel or no engine. I thought it was wiser to make do with second place which, in any case, is an excellent result for me."*

Not the best of starts for Senna. Mansell pulls over to the centre of the track.

AT ONE MOMENT IT LOOKED AS THOUGH BERNIE WAS GOING TO TAKE OFF, OR AT LEAST AS THOUGH HE WAS TRYING TO IMITATE JOHN CLEESE.

Another happy man at the end of the race was Bernard Dudot, Renault's motorist. With six engines at the start, six at the finish and four in the top six positions, he had every reason to feel pleased with the reliability of the V6, although the French constructor still hasn't found the ideal power/consumption compromise. *"Brazil was only the first race of the season,"* he pointed out, *"and we'll have to wait until Imola before we can come to any meaningful conclusions. Our engine appears to be reliable."* The rhythm that Senna, Laffite and Arnoux were forced to adopt tends to underline that Renault will have to progress if they don't wish to play at second best during the coming year, an opinion which Gerard Larrousse goes along with. *"We've just lived through a totally uninteresting GP where drivers can't have been at more than 80% of their potential, possibly less. That's not what F1 should be about. If it carries on like that, everyone, drivers and spectators alike, is going to lose interest. The Honda engine's performance and reliability were quite astounding and 1m 33.54 seconds is a splendid, yet worrying lap record. It is clear that the Japenese engine is going to be the one to beat this year. Perhaps Porsche will be able to match it but I think that we are just going to have to wait and see."*

A tough but realistic analysis of the situation from the Ligier team-manager. Dudot, however, seems to see the Porsche as the Renault engine's principal adversary. *"I was especially impressed by Alain Prost's fight back through the field and I would have been more than interested to see what would have happened had he not retired."*

Prost's retirement was due to piston failure caused by the excessively weak air-petrol mixture, rendered necessary by the length of the race. It was either that or running out of fuel, the McLaren team had no choice. The Germans apparently haven't succeeded in solving the problem as efficiently as their Japanese counterparts.

QUALIFYING

After the traditional handshakes and kisses that mark the first getting together of a new season, everybody popped along to pay a courtesy (or should that be curiosity) visit to the Brabham pits. Gordon Murray was there in his Eric Clapton tee-shirt and pink sunglasses whilst Ecclestone was sporting one of his immaculate white shirts. Patrese and De Angelis were all smiles, the German motorists appeared in control of things and the three kippers themselves were resting on their trestles looking like ironing boards. At this particular moment, Gordon Murray seemed both amused and anxious at the same time; amused that his latest creation was the cause of so much interest but also anxious because he knew that the BT55's day of judgement was nigh and that in a few minutes time the F1 world would be able to form its first opinions.

Someone lifted one of the covers, to the general craning of necks. *"Quite a bit has changed since the first Rio tests,"* pronounced the odd voice. But it was true and Murray had no intentions of hiding the fact. *"I've adopted a larger intercooler, I've moved the radiators to evacuate as much heat as possible and I've designed a new rear wing to increase downforce. Thats about all."* No mention of the small carbon pyramid that has been added to the top of the front roll over bar which looks as though it's been included to highten the imaginary line that goes above the driver's helmet. Did that mean that the driving position had been raised too? *"Not in the least . We designed the car around Piquet before he left,"* pointed out Murray. *"Elio and Ricardo are both taller so I've had to review the design but I haven't touched the position of the seat."*

It had just gone 10 o'clock and the moment of truth was fast approaching. The two drivers squeezed, not without difficulty, into the narrow tub. Somebody clipped the belts in place, the drivers lowered their visors and drove away from the shade of their pits. Almost immediately, or so it seemed, they were back; De Angelis at a crawl, the turbo broken, and Patrese by foot. His engine had given out somewhere on the track. With only one spare car available, De Angelis could only manage 11 laps and Patrese 7 during the 90 minute unofficial practice. We would have to wait until 1 o'clock for the first qualifying period before we would be able to get a realistic idea of the BT55's potential. Everybody's appetite had been whetted, the car's line looked as though it would penetrate the air like an arrow.

It should be pointed out that Elio and Rick weren't the only two to have hit

If many predicted that Piquet and Senna would get onto the winners' rostrum, Laffite's presence for the second time in two GPs came as a welcome surprise.

trouble that morning. Dumfries' Lotus had caught fire after a pick-up pump in the turbo lubrification system had failed. Palmer's engine had blown, Boutsen had trouble with his injection before an oil pipe split on his spare car, etc. The most spectacular incident of the morning, however, was when Arnoux arrived in pit-lane with the rear end of his Ligier engulfed in flames. The fire was immediately extinguished but the French driver was obliged to take out the spare car which wasn't fitted with the latest pneumatic distribution that the Blues were using for qualifying. The damage to the burnt out car turned out to be quite serious. The exhaust turbine had exploded, spreading fire to a large part of the rear body,an incident which plagued the Ligier team during February's testing.

As soon as official qualifying got under way, everybody's eyes were riveted to their stop-watches, ready to verify the performance of the kippers. Alas, while Senna, Piquet and Mansell were fighting it out to thousandths of seconds, De Angelis and Patrese had already fallen foul of the same problem. Despite having a brand new engine, the latter didn't even manage to get in a complete lap. Nearly half an hour was spent in the pits while the BMW men tried to get to

TEAM BY TEAM

The start of any season is always an exciting moment. It is a time when we can discover new, sometimes revolutionary machines like the BT55. It is also a moment for reflection as everybody with the slightest interest in the sport ponders on the hierarchy for the forthcoming months, bearing in mind the driver transfers and technical developments of the off-season. The conundrum has possibly been less problematic for 1986.

McLAREN

CHASSIS	DRIVER
MP4-2C/2	Rosberg
MP4-2C/3	Prost
MP4-2C/1	Spare (Prost)

Following the British team's two consecutive World Championship winning seasons (drivers and constructors), John Barnard preferred not to follow Murray's example and Prost's and Rosberg's cars have only undergone detail changes compared with the MP4-2B. Indeed, from the outside, the MP4-2C is pretty much identical to last year's model. The carbon shell has been revised in the vicinity of the fuel tank, the rear wing has been modified, the rear suspension movement has changed although the geometry has not been touched and the turbos have been relocated in an effort to accentuate the waisted rear end. Major modification concerns the fresh air intake for the turbos which is now located in front of the side-pods and no longer in front of the rear wheels. Mechanically, the McLaren's development continues although it is difficult to obtain any precise information. The Bosch engine management now automatically controls air flow to the turbos according to its needs of the moment. Fuel consumption has not been forgotten at Woking.
KKK have also been working on a new turbo which will be capable of producing higher pressure for qualifying, but more of that later in the season.

TYRRELL

CHASSIS	DRIVER
014/3	Brundle
014/2	Streiff
014/1	Spare

Big Ken was hoping to have one 015 for Rio but time ran out and so three 014s made the trip to South America, sporting the colours of his new sponsor.

WILLIAMS

CHASSIS	DRIVER
FW 11/02	Mansell
FW 11/03	Piquet
FW 11/01	Spare

One of the two FW11s tested at Paul Ricard before the start of the season, FW11/02 in fact, was damaged in a small fire when the turbo, exploded so Patrick Head planned on bringing along an FW10 as spare car for Rio. The drivers, however, protested: *"To drive an FW10 after having tried the FW11 would be like stepping back in time,"* claimed Mansell. *"The new car is capable of going as quick in the rain as the old one was in the dry!"* The mechanics consequently got on with the job of rebuilding FW12/02 to satisfy the Williams drivers' wishes. The water cooled, variable geometry scroll Ihi turbos were not used, but Mansell's car was fitted with the new floating twin-disc brakes.

The Brabham BT55, or the 'kipper' as it has been baptised, was the star of the beginning of the new term.

BRABHAM

CHASSIS	DRIVER
BT55/4	Patrese
BT55/3	De Angelis
BT55/2	Spare

At last we were able to get a look at the famous BT55 which has been considerably modified since testing at Rio in February. Apparently the gear-box problems have been solved, the fault being traced back to a series of faulty components. It would appear that the engine overheating problems are also in the process of being overcome. Murray's solutions have been quite radical: The intercooler, oil and water radiators have been re-sited so as now to be cooled by an external air-flow, with lateral air outlets. The engine, however,remains totally out of contact with cold air, possibly one of the principal reasons for the BT55's problems. Be that as it may, the latest Brabham is a most beautiful beast!
The body has been revised and a new rear wing design has been introduced, an indication that the downforce initially hoped for by Gordon Murray has not been achieved.

LOTUS

Senna's confidence couldn't have been higher as teams arrived in Brazil following his 1m 26.39s obtained during February's testing at Jacarepagua. The local hero must also have been hoping for a win to celebrate his 26th birthday. Peter Warr was nevertheless cautious in his enthusiasm, preferring to underline that it was going to be a difficult race for Lotus and that fuel consumption and tyre wear were two great unknowns. Similarly to the two Ligiers and to Brundle's Tyrrell,

CHASSIS	DRIVER
98T/3	Senna
98T/2	Dumfries
98T/1	Spare

Dumfries' and Senna's cars were fitted with the latest Renault V6 engines which feature the new pneumatic timing (DP) but only the Brazilian would benefit from this advantage during the race.

ZAKSPEED

CHASSIS	DRIVER
861/2	Palmer
861/1	Spare
—	—

The latest from the German team, the Zakspeed 861, featured a restyled body made possible by a smaller fuel tank, a few aerodynamic modifications and, more importantly, Bosch Motronic electronic injection. Suspension remained as last year.

LOLA/HART

It was rumoured in Rio that the Lolas will be fitted with the new Ford Cosworth engine earlier than first thought. The more optimistic predictions say that the V6 will be ready in time for the Spanish Grand Prix, whilst others say that San Marino is a more realistic bet. In the meantime, the

CHASSIS	DRIVER
THL/002	Jones
THL/003	Tambay
THL/001	Spare

TLH1s were used in Brazil fitted with the 4-cylinder Hart engines. Otherwise basically the same as last year's car, the TLH1 featured modified aerodynamics which had been introduced during the development of the THL2/Ford.

ARROWS

CHASSIS	DRIVER
A8/2	Surer
A8/4	Boutsen
A8/6	Spare

While the Arrows team continue to work on the eagerly awaited A9, expected to be ready for Monaco, the hardy A8s were available in Rio. Until the new car is ready, Surer and Boutsen will just have to do their best, especially since the A8's aerodynamics are fairly basic which will probably have an adverse effect on fuel consumption.

BENETTON

Rory Byrne's three new cars experienced three major problems when they initially came out of the workshops; the relative inefficiency of the intercooler, excessive understeer and the greatest of difficulty getting tall Berger into a cockpit designed around the somewhat smaller Teo Fabi.

CHASSIS	DRIVER
B 186/02	Berger
B 186/03	Fabi
B 186/01	Spare

Berger now seems to be comfortable and the Benettons could well prove a surprise in future races.

OSELLA

CHASSIS	DRIVER
FA1-G/85/01	Ghinzani
FA1-G/85/02	Danner
—	—

Brave Enzo is still there but only with the ageing FA1C-85s and powered by the thirsty Alfa V8 engine. The FA1F-86/ Motori Modernis might be ready in time for the San Marino GP but budgets are still much of a problem for the Italian team. Ghinzani's replacement of the young Capelli is an illustration of this.

MINARDI

CHASSIS	DRIVER
M 185-B/001	Nannini
M 185-B/002	De Cesaris
M 185-B/004	Spare

Once again, only revamped '85 material was available in Rio. Major modifications include the fitting of a smaller fuel tank under the roll over bar, diagonally mounted radiators, some aerodynamic improvements and the appearance of Marelli-Weber electronic injection on Carlo Chiti's V6 engine. De Cesaris even benefitted from the use of an onboard computer as seen on the 1985 Ferraris!

LIGIER

CHASSIS	DRIVER
JS27/01	Laffite
JS27/02	Arnoux
JS27/03	Spare

Little had been modified on the Ligier JS27 since its pre-season test programme. *"We have simply worked on making the exhaust area more reliable and we have adopted a new gear selector. Contrary to what we had planned for medium-speed circuits, we have decided to use the 6-speed box here in Brazil, principally in an effort to counteract the 'peaky' characteristics of the Renault V6."*

FERRARI

CHASSIS	DRIVER
F1-86/087	Johansson
F1-86/088	Alboreto
156-85/085	Spare

Ferrari produced a surprise when they announced their latest car for 1986 after most observers were expecting the Italian team to start the new season with last year's car. There nevertheless remains a lot of sorting to be done to the brand new chassis.

the root of the problem. To no avail, however, and the Italian's car finally definitively stopped out on the circuit. By the time he got back to the pits and installed in the spare car, the chequered flag had fallen announcing the end of qualifying. Patrese would nevertheless be able to start thanks to the fact that there were only 25 cars entered for the Brazilian GP. What about De Angelis? His afternoon had been no more fruitful. A temperamental gear selector had caused him to spin before he experienced a series of injection problems. The engine consequently gave up the ghost but at least De Angelis had been able to record 14th fastest time, just. The expression on Murray's face had progressively altered during the session. Initially amused, he had become pensive. Initially standing, he had sat down on a box, his head in his hands, lost in unfathomable thought. *"What if I've got everything wrong?"* he seemed to be asking himself. Paul Rosche, engine manager, was a shade more explicit as he shook his head slowly from left to right. Where was Bernie? We'd hardly noticed him all day. He was there, though, his sleeves rolled up to the elbow, gesticulating to his engineer. His arms seemed to be saying that Gordon should fit an intercooler as wide as that, as high as that, fitted like that and with the air outlet as big as that. At one moment it looked as if he was going to take off, or at least as though he was trying to imitate John Cleese. Things looked bad. *"Don't be pessimistic,"* advised someone from BMW reassuringly. *"It's only a question of detail, it's not the whole car's conception that's at fault. Murray's design is completely new and original and we've had to start from scratch. Anyway, we believe in him and the car."* De Angelis took things philosophically. *"Although the bloody thing's always going wrong, I sincerely believe in the BT55. The day it works well, watch out! For that reason alone, I don't mind working twice as hard on its development. I am eager to see what it's going to be like when everything is sorted out."* Patrese's thoughts? Let's say that he appeared very patient, but then he's already been through all that three years ago.

The problem lay in the fact that Piquet, Senna and Alboreto had been flashing past in front of the pits at a measured speed of 233.6, 232.92 and 232.52 kph respectively whilst the two Brabham drivers had been neck and neck at... 211.81 and 211.23 kph, not a great deal better than the Osellas! There were other pointers; Berger and his Benetton had been clocked on entry to the South Bend, fastest part of the Brazilian circuit, at 308.48 kph and Senna's speed was given as 304.83. All Patrese and De Angelis could manage was 287.16 kph and 272.38 . On the face of it, two reasons seemed likely:

— Either Murray had got his aerodynamics completely wrong for the day and had fitted a wing giving lots of downforce but which restricted top speed.

— Or the layout of the BMW engine and its accessories did not allow heat to dissipate efficiently enough, causing very high running temperatures and consequently limiting turbo-pressure. That could result in other problems like hot spots in the combustion process (hence the broken engines) or fuel feed. Ecclestone's gestures which seemed to be diagnosing a larger intercooler "as big as that' were probably well founded but possibly not the whole answer.

Anyone who hesitated in predicting a likely pecking order for the coming year was soon put right in Rio. Piquet set the first pole position time in front of Senna, Mansell and Prost. With two Brazilians out front, the crowd was understandably ebullient, split between the two national heros. The absolute record time for the circuit (1m 26.39s) set by Senna during private testing was forgotten as Nelson put in an impressive 1m 26.266s, slashing a second and a half off Alboreto's pole position time of 1985. Piquet was confident that he could get under the 1m 26s barrier once his car and gear ratios were perfectly set up. Prost's time, despite being only 4th fastest was cause for a little personal satisfaction to the Frenchman. He knows that he is rarely in with a chance for a good qualifying time and he usually exploits practice sessions to get the car absolutely right for the race.

Over in the Ferrari pits, the atmosphere was far from joyful. It shouldn't be forgotten that the F1/86 had only just been taken out of its wrappings and required some final detail development work. With a 1m 30.156s, Alboreto was a long way off his pole position time of the previous year! Their major problem turned out to be with the fuel pump drive which made things slightly awkward for the engineers that had come out especially from Italy to set up a new computer which is meant to measure fuel consumption cylinder by cylinder and lap by lap according to engine speed and turbo-pressure.

WITH TWO BRAZILIANS OUT FRONT, THE CROWD WAS UNDERSTANDABLY EBULLIENT

Brazil is traditionally a place where one re-discovers the real colour of the sky after the European winter. Blue was also the colour of the little French cars which surprised many during that first timed practice. Laffite had impressed with a 7th time but the following day it was Arnoux who was out to prove a thing or two to certain teams. His 10th fastest time in the spare car fitted with the race engine wiped the smiles off a few faces on both sides of the Alps. The Ligier boys were definitely in good form and the JS27 gave the impression that it was going to be a force to reckon with over the months to come. Despite his age, Jacques Laffite is as motivated as ever and the French engineers have come up with more than one trick to bring the Ligier F1 car back to a level it should never have vacated. The day before, the whole team had gathered round the table of a restaurant located in the middle of an island to discuss tactics for the second and final timed practice session. The prevailing atmosphere was one of calm and confidence while it was decided that Laffite would concentrate on consumption tests with the spare car during untimed practice whereas Arnoux was to work on progressive stiffening of the suspensions. The new settings that were to be tested in an effort to eliminate a slight oversteer were finally rejected and more classical settings were selected.

Arnoux and Laffite spent most of the race in each other's company, Laffite profiting from his team-mate's tyre wear problems towards the end of the race to snatch third.

With the problem of fuel consumption always at the back of his mind, Senna could not even envisage trying to match Piquet's pace.

De Angelis had just called into his pits to try and cure the coughing engine that had been handicapping him, when the session was suspended. Alboreto and Tambay had just tangled. *"My pits had just ordered me to come back in,"* explained the Lola driver, *"so I lifted off, still keeping my line through the left hander I was negotiating. Suddenly I spotted Alboreto's Ferrari in my mirror and, so as not to hinder him, I pulled over to the inside."* The problem was that Alboreto must have found that Tambay was taking his time in getting out of the way and he too pulled over to the inside. The resulting coming together of the two cars was quite violent, the Italian driver's rear right wheel mounting the Frenchman's front left, and the two cars ended up in the rails. Tambay was slightly concussed in the incident when he received his own wheel on his helmet but nothing serious. Alboreto was furious. The rear end of his Ferrari was totally destroyed, engine and gearbox included, particularly upsetting since the spare was only a 156/85 from last year. There was a brief exchange of words between the two men which ended in a total lack of mutual understanding. As final timed practice approached, Alboreto had to wait while his mechanics got on with the job of rebuilding the car. The fact that they managed is worth a mention but they could have saved themselves the trouble as the fuel pump broke again and Michele finally put in 8th fastest time with the former 156/85...

previous day, Piquet wanted to go even faster, if only just to see what the Williams-Honda was capable of. His first set of qualifying rubber was wasted when he was slowed by Surer who had just broken his throttle cable. The Brabham driver immediately set out for a second attempt but this time committed one of his rare driving faults. He badly judged a small rise and lost control of the rear of the car, not helped by the thin layer of dust that covered the track, and the BT55 span into the rails. *"I had to take that line if I was to put in a good time"* admitted Piquet. *"I took a risk and off I went. There's no serious damage. My right wrist is hurting a bit, I hope I'll be alright for the race."*

Mansell went out in a determined effort to do better than his unfortunate team-mate but he could only manage second fastest. All eyes turned to the black Lotus of Senna: 1m 27.403s with his first set of qualifying tyres, slower than the day before but the Lotus technicians located the problem which was a poor programming of the electronics. Then news spread round that Laffite had just put in 1m 28.183s faster than Alboreto, Rosberg and many others. Jacques himself had as much difficulty in believing it as the others. *"1m 28.183s? Let's have a look at that,"* he said to Tetu, his hair glued to his head with sweat after the effort. *"Where are all the youngsters then? 1m 27.403s for Senna? He put in 1m 26.983s yesterday... I'm going to eat 'magic boy' up! (Magique is what Laffite calls Senna.) They say that I'm no good in qualifying. I'll make them eat their words. The rest don't scare me. I only need a good car to go quickly!"*

That was Lafitte's frame of mind as he left the pits on his second set of qualies. He promptly took a second off his first time and was consequently 5th fastest, 6 hundredths of a second slower than Arnoux. Out went Senna again with his final set of qualifying tyres... 1m 25.501s, a time nobody else could even approach. Ducarouge had predicted that pole position time would be around the 1m 25.5s mark. Ayrton was a little more modest; *"I thought I was going to improve on my time of yesterday, but not by that much. On the first bend of that lap I realised that the car was perfectly set up and I said to myself* 'steady, Ayrton, we can't make any mistakes this time.' *That lap gave me a great deal of pleasure, a satisfaction that one rarely feels in F1. Now it's time to start thinking about the race and that's going to be a completely different kettle of fish. The engine won't be the same, the tyres won't be the same, it's more or less a different car I'll be driving. In fact I'm a little less optimistic about the race. The Williams and McLarens are likely to be more reliable than the Lotus and I'm a little anxious about the 98T's consumption."*

As for Prost, he had predicted that he would be 6th or 7th on the starting grid. He eventually started in 9th position behind his new team-mate Rosberg, a state of affairs that will ensure that the Frenchman's motivation will be as intact as ever during 1986. ■

All 25 drivers on the starting grid of the first GP of the 1986 season were preoccupied by two major factors; how were the tyres going to hold out in the heavy heat of the Jacarepagua circuit with the power of the latest generation engines, and were they going to have enough fuel to complete the 61 lap, 306 km race? Main interest for the 60,000 Brazilian spectators that formed a colourful back-drop to the proceedings was which of their two heros, Senna or Piquet, was going to win. It was likely to be a duel between youthful determination and wise experience, unless the overbearing worry of excessive fuel consumption was going to falsify the issue...

10 LAPS

Piquet 16m 10.583s; Senna 16m 15.505s; Alboreto 16m 21.015s; Arnoux 16m 26.973s; Prost 16m 28.462s; Johansson 16m 33.597s; Patrese 16m 35.349s; Laffite 16m 35.644s; De Cesaris 16m 41.235s; Tambay 16m 44.364s; Boutsen 16m 52.243s; Dumfries 16m 52.857s; Brundle 16m 54.098s; De Angelis 16m 54.479s; Berger 16m 55.601s; Surer 17m 03.157s; Palmer 17m 15.198s; Streiff 17m 15.691s; Ghinzani 17m 39.411s; Danner 17m 45.362s; Nannini 9 laps; Fabi 7 laps.

The minutes before the start were a chance for Piquet to send a goodwill message to Frank Williams who was laid up in hospital on the other side of the Atlantic. A board bearing the words *"Wish you were here,"* was held in front of his car on the starting grid and filmed by TV. Another message, this time from certain rival team-managers, stating *"Don't worry Frank, we are minding the store"* was similarly transmitted

The Green light was given at 13h, under a hazy sky accompanied by a welcome breeze. Piquet, Senna and Mansell shot off practically together and were wheel in wheel as they braked for the right-hander that follows the start/finish straight. One of them was going to have to lift off and it turned out to be Piquet who preferred to leave the two hares to it. Senna managed to ward off Mansell's impressive attack before the Englishman made an all out effort to get the better of the Brazilian driver on the South Bend, a fast left. Mansell's bid to pass Senna was possibly a little hasty and it might have been better to wait for lap 2 or even lap 3. In any case, the Williams a little over-optimistically took the inside line but Senna negotiated the curve as though Mansell wasn't there, following his trajectory and diving into the inside in front of the Williams. An off was inevitable and Mansell opened the list of retirements. Consequently, Senna had a relatively "comfortable" lead with only Piquet at his heels. Arnoux followed, 2.1s behind Senna, followed in turn by Alboreto, Rosberg, Johansson, Patrese, Laffite, Jones, Tambay and Prost, whose start had been more than just a little cautious.

20 LAPS

Prost 32m 36.993s; Senna 32m 37.972s; Piquet 32m 54.213s; Arnoux 32m 56.679s; Laffite 33m 04.171s; Tambay 33m 22.782s; Dumfries 33m 26.949s; Johansson 33m 31.366s; Patrese 33m 37.953s; Berger 33m 39.554s; Brundle 33m 59.010s; Boutsen 34m 05.523s; Streiff 34m 13.230s; Alboreto 19 laps; Palmer 19 laps; De Angelis 19 laps; Danner 19 laps; Fabi 17 laps.

Piquet demonstrated his experience over the next two laps, happy just to trail his fellow Brazilian. Then, on lap 3, confident in his car and in himself, Piquet closed in on the Lotus and passed it without the slightest hesitation. Once past, nothing could stop him pulling away. At the end of that lap his lead was 0.69s, 1.24s after the following lap, 1.46s after lap 6, increasing to 4.92s after 10 laps. Mansell had already been joined in the stands by Jones and Rosberg both with engine problems. Prost must have been worried by the early exit of his new team-mate, but he was nevertheless getting on with the job of climbing through the field with relative ease. After 6 laps, the reigning World Champion was already up to 7th, Patrese was passed on lap 8 and Johansson a lap later. On lap 10, the Frenchman beat the lap record that Piquet had just set and promptly closed in on Arnoux. The Ligier driver was passed on the next lap but Prost had to wait until lap 16 to overtake Alboreto after his first attempt failed when the Ferrari driver put up more resistance than the others. However, on lap 16 , the Italian could do nothing to stop Prost getting by and, afterwards, was not able to match the Frenchman's pace as the McLaren pulled away. In any case, the Ferrari pulled into the pits three laps later to change tyres, dropping from 4th to 13th in the process.

Thirteenth at the end of the first lap, leader after 20 laps, would Alain Prost have worried Piquet if a piston hadn't decided otherwise

Not a good day for the Ferrari team as neither of the new cars managed to finish.

30 LAPS

Piquet 48m 51.117s; Senna 49m 16.003s; Prost 49m 37.969s; Arnoux 49m 59.263s; Laffite 50m 07.781s; Brundle 29 laps; Dumfries 29 laps; Boutsen 29 laps; Alboreto 29 laps; Berger 29 laps; Streiff 29 laps; De Angelis 28 laps; Fabi 26 laps.

At the same time, Piquet stopped for the same reason. The race hadn't even reached a third of its total distance! Ayrton Senna inherited the lead but the gap between him and Prost was only 0.64s. Piquet's tyre change went off extremely well and, as he came back out onto the circuit, he had only dropped two places. It was Senna's turn to change rubber on lap 20 and Prost was suddenly in the lead, 13.77s ahead of Piquet, 23.13s ahead of Arnoux, 30.59s in front of Senna and 31.71s ahead of Laffite. Obviously Prost's lead was very fragile since the two Brazilians were both on fresh rubber whereas Prost was obliged to call in at the pits to change his sooner or later. The McLaren's handling was visibly deteriorating. Prost's lead over the Williams of Piquet was already down to 7.73s by the end of lap 24, 3.78s by the end of the following lap before the Frenchman had no option but to let Piquet through. Prost couldn't wait any longer for new tyres and, predictably, he stopped at the McLaren pits on the following lap rather than risk going off. The change was carried out in only 9.49s which meant that Prost rejoined the race in 3rd position, 22s behind Senna and 46.85s adrift of Piquet. Prost believed that he was capable at least of catching Senna but, on lap 30, the McLaren suddenly slowed and Prost drove back into his pits. A piston had blown, the same problem that had struck Rosberg in the early stages of the race...

In fact a number of drivers had disappeared by this time, namely De Cesaris, Nannini, Surer, Palmer, Patrese, Tambay, Johansson, and Danner. The casualty list for Rio was particularly high and Alboreto, who had gamely fought his way back to 6th after his tyre change, was soon to find his name on that list. However, with or without all those retirements, the race had lost most of its interest. Piquet's domination was such that the Williams driver could afford to take his time. It wouldn't have come as a surprise to see him driving with one hand, the other arm resting on one side. Senna was doing his best to stay as much in touch as possible.

40 LAPS

Piquet 1h 05m 01.088s; Senna 1h 05m 22.480s; Arnoux 1h 06m 08.281s; Laffite 1h 06m 10.990s; Berger 39 laps; Brundle 39 laps; Streiff 39 laps; Dumfries 38 laps; De Angelis 38 laps; Fabi 36 laps.

The gap between the two was 30 seconds after the 35th lap, but Piquet could already relax and spare his car, asking little of his tyres and economising precious fuel. Interest came alive again on lap 41 when Piquet stopped to change tyres again, leaving Senna in the lead for the third time, but the Lotus driver stopped just one lap later for the same reason and that was that until the finish.

There was little else to fix one's attention upon. Most drivers were content to keep to their different positions, their eyes fixed on their computers. The only Brabham left in the race, that of De Angelis, was desperately looking to finish despite a coughing engine. Thankfully there were the Ligiers of Arnoux and Laffite to entertain us.

50 LAPS

Piquet 1h 21m 35.331s; Senna 1h 21m 52.591s; Arnoux 1h 22m 25.916s; Laffite 1h 22m 26.492s; Brundle 49 laps; Berger 49 laps; Streiff 48 laps; De Angelis 48 laps; Dumfries 47 laps; Fabi 46 laps.

Laffite completed the first lap in 8th position but had caught up with his teammate by lap 24. The pair remained in tandem until lap 50, by which time René and Jaques were lying third and fourth respectively. The former was beginning to have problems with his tyres and was also getting a bit wary about the amount of petrol he had left. Laffite, whose slower start meant that he was less worried about fuel, saw the chance of finishing in the top three and passed Arnoux who pulled respectfully aside to allow his colleague through. There was not the slightest trace of friction between the two. Guy Ligier, watching the race on TV from his Vichy base in France, must have savoured his drivers' results.

Behind the Ligiers, there was a procession of drivers who didn't seem to realise they were in a Grand Prix. They were out simply to finish, a feat in itself... Brundle was a lap adrift, Berger and Streiff two, De Angelis and Dumfries three and Fabi five. In future, instead of limiting fuel, FISA could make all the drivers start blindfolded and carry a white stick. Possibly less of a technical means of restricting power, but at least it would be more fun for the spectators... who pay!

LAP BY LAP

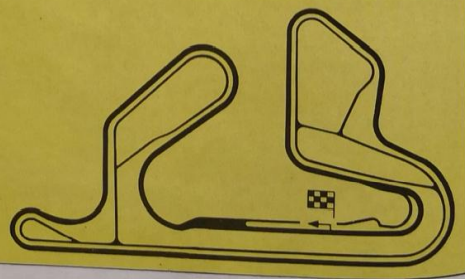
F1 : BRAZILIAN GRAND PRIX

GRID POS.	12	6	5	25	26	27	2	28	1	7	11	19	16	8	18	20	3	4	15	17	14	23	21	22	24
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Lap 1	12	6	25	27	2	28	7	26	15	16	11	18	1	3	19	8	20	23	14	4	17	24	22	21	5
2	12	6	25	27	2	28	7	26	15	16	1	18	11	3	8	23	20	19	14	4	17	24	22	21	
3	6	12	27	25	2	28	7	26	15	16	1	18	11	23	3	8	20	19	14	4	17	24	22	21	
4	6	12	27	25	2	28	7	26	15	1	16	18	11	23	11	3	8	20	17	14	4	24	22	21	19
5	6	12	27	25	2	28	7	26	1	16	15	18	23	11	3	8	20	2	17	14	4	24	22	21	19
6	6	12	27	25	28	7	1	26	16	18	23	11	3	8	20	17	14	4	24	21	22	19	2		
7	6	12	27	25	28	7	1	26	16	23	18	11	3	8	20	17	14	4	24	21	22	19			
8	6	12	27	25	28	1	7	26	16	23	18	11	3	8	20	17	14	4	21	22	24	19			
9	6	12	27	25	1	28	7	26	16	23	18	11	3	8	20	17	14	4	21	22	24	19			
10	6	12	27	25	1	28	7	26	23	16	18	11	3	8	20	17	4	14	21	22	24	19			
11	6	12	27	1	25	28	26	7	23	16	18	11	3	8	20	17	4	14	21	22	24	19			
12	6	12	27	1	25	28	26	7	23	16	18	11	3	6	20	17	4	14	21	22	24	19			
13	6	12	27	1	25	28	26	7	23	16	18	11	3	8	20	17	4	14	21	22	24	19			
14	6	12	27	1	25	28	26	23	7	16	11	18	3	20	8	17	4	14	21	22	24	19			
15	6	12	27	1	25	28	23	26	7	16	11	18	20	3	17	8	4	14	21	22	24	19			
16	6	12	1	27	25	23	26	7	28	16	11	20	18	17	8	3	4	14	22	24	19	21	23		
17	6	12	1	27	25	26	7	16	11	20	28	18	17	8	3	4	14	22	24	19					
18	6	12	1	27	25	26	7	16	11	20	28	8	3	17	18	4	14	22	24	19					
19	12	1	6	25	26	16	11	28	20	7	3	18	27	17	4	14	8	22	19	17					
20	1	12	6	25	26	16	11	28	7	20	3	18	4	27	14	22	8	19	14						
21	1	12	6	25	26	16	11	28	20	3	7	18	4	27	8	22	19	7							
22	1	6	25	12	26	16	28	11	20	3	18	4	27	8	22	19									
23	1	6	25	12	26	16	28	11	20	3	18	4	27	8	22	19									
24	1	6	12	25	26	28	16	11	3	18	27	20	4	8	22	19									
25	1	6	12	25	26	28	11	3	18	27	20	4	8	22	19	16									
26	1	6	12	26	25	28	11	3	18	27	20	4	8	22	19										
27	6	1	12	26	25	3	18	11	27	20	4	8	22	19	28										
28	6	1	12	26	25	3	18	11	27	20	4	8	22	19											
29	6	12	1	26	25	3	11	18	27	20	4	8	22	19											
30	6	12	1	25	26	11	3	18	27	20	4	8	19	22											
31	6	12	25	26	11	3	18	27	20	4	8	19	1												
32	6	12	25	26	11	27	3	18	20	4	8	19													
33	6	12	25	26	11	27	18	3	20	4	8	19													
34	6	12	25	26	11	27	20	18	3	4	8	19													
35	6	12	25	26	11	27	20	18	3	4	8	19													
36	6	12	25	26	11	20	3	4	8	19	18	27													
37	6	12	25	26	11	20	3	4	8	19	18														
38	6	12	25	26	11	20	3	4	8	19	18														
39	6	12	25	26	20	3	4	11	8	19															
40	6	12	25	26	20	3	4	8	11	19															
41	12	6	25	26	20	3	4	8	11	19															
42	6	12	25	26	20	3	4	8	11	19															
43	6	12	25	26	20	3	4	8	11	19															
44	6	12	25	26	20	3	4	8	11	19															
45	6	12	25	26	20	3	4	8	11	19															
46	6	12	25	26	3	20	4	8	11	19															
47	6	12	25	26	3	20	4	8	11	19															
48	6	12	25	26	3	20	4	8	11	19															
49	6	12	25	26	3	20	4	8	11	19															
50	6	12	25	26	3	20	4	8	11	19															
51	6	12	26	25	3	20	4	8	11	19															
52	6	12	26	25	3	20	4	8	11	19															
53	6	12	26	25	3	20	4	8	11	19															
54	6	12	26	25	3	20	4	8	11	19															
55	6	12	26	25	3	20	4	8	11	19															
56	6	12	26	25	3	20	4	8	11																
57	6	12	26	25	3	20	4	8	11																
58	6	12	26	25	3	20	4	8	11																
59	6	12	26	25	3	20	4																		
60	6	12	26	25	3																				
61	6	12	26	25																					

■ Starting grid position
□ On leader's lap
■ 1 lap or more behind leader
■ Pitstop
■ Retired in the pits
■ Retired on the track

AUTODROMO INTERNACIONAL DO RIO DE JANEIRO

5.031 kilometres
3.126 miles



STATISTICS

BRAZILIAN GRAND PRIX

Opening round of the 1986 F1 World Championship.
Date: March 23, 1986.
Circuit: Jacarepagua.
Track Length: 5.031 km/3.144 miles.
Race Distance: 61 laps or 306.891 km/191.807 miles.
Weather: Hot. Misty sky with light southerly wind.
Attendance: 60,000.
Qualifying: 25. **Qualified:** 25. **Starters:** 25.
Finishers: 10. **Classified:** 10.

FOR THE RECORD

• First GP and first win for Piquet as member of the Williams-Honda team • First GP for Arnoux with Ligier, Berger with Benetton (ex Toleman), De Angelis with Brabham, Dumfries with Lotus, Danner with Osella, Tambay with Lola, Nannini and De Cesaris with Minardi and Rosberg with McLaren. • First GP with a BMW engine for Benetton. • First points for Brundle (those obtained in 1985 were cancelled by the FIA Appeal Tribunal).

PREVIOUS WINNERS

(Last five editions)
1985: **Prost** (McLaren MP4-2B)
1984: **Prost** (McLaren MP4)
1983: **Piquet** (Brabham BMW BT52)
1982: **Piquet** (Brabham BT49D)*
1981: **Reutemann** (Williams FW07C)
* Disqualified for illegal car, victory going to **Prost**.

PIT STOPS

Lap 6: **Fabi,** to check injection.
Lap 16: **Brundle,** tyres.
Lap 17: **Johansson,** tyres.
Lap 18: **Boutsen,** tyres.
Lap 19: **Piquet,** tyres; **Patrese,** tyres and to check engine; **De Angelis,** tyres and to check engine; **Alboreto,** tyres and to check engine.
Lap 20: **De Angelis,** to check engine; **Alboreto** to check engine; **Palmer,** tyres.
Lap 21: **Patrese,** to check engine.
Lap 22: **Fabi,** tyres.
Lap 24: **Berger** tyres and to check engine; **Brundle,** tyres.
Lap 26: **Streiff,** tyres.
Lap 27: **Dumfries,** tyres; **Arnoux,** tyres.
Lap 28: **Danner,** tyres.
Lap 29: **Prost,** tyres.
Lap 30: **Laffite,** tyres.
Lap 32: **De Angelis,** tyres and to check engine.
Lap 35: **Boutsen,** repairs to exhaust.
Lap 36: **Boutsen,** repairs to exhaust.
Lap 37: **Boutsen,** repairs to exhaust.
Lap 39: **Dumfries,** to check engine.
Lap 40: **Dumfries,** to check engine.
Lap 41: **Piquet,** tyres.
Lap 42: **Senna,** tyres.
Lap 46: **Berger,** tyres and to check engine.
Lap 48: **Fabi,** tyres and to check injection.

RETIREMENTS

Lap 1: **Mansell,** accident with Senna.
Lap 6: **Jones,** injection.
Lap 7: **Rosberg,** piston.
Lap 17: **Ghinzani,** engine; **De Cesaris,** engine.
Lap 19: **Nannini,** oil leak.
Lap 20: **Surer,** engine.
Lap 21: **Palmer,** broken inlet manifold.
Lap 22: **Patrese,** water leak.
Lap 25: **Tambay,** injection.
Lap 27: **Johansson,** accident resulting from brake problems.
Lap 30: **Danner,** engine.
Lap 31: **Prost,** piston.
Lap 36: **Alboreto,** fuel pump.
Lap 38: **Boutsen,** exhaust.

THEIR FASTEST LAPS

Piquet	1m 33.546s	Brundel	1m 37.869s
Fabi	1m 33.998s	Rosberg	1m 38.027s
Senna	1m 34.785s	Patrese	1m 38.409s
Dumfries	1m 35.033s	Boutsen	1m 38.491s
De Angelis	1m 35.121s	Tambay	1m 38.674s
Prost	1m 35.381s	Jones	1m 38.710s
Alboreto	1m 35.532s	Streiff	1m 39.651s
Laffite	1m 35.767s	Surer	1m 39.970s
Arnoux	1m 36.414s	Nannini	1m 40.461s
De Cesaris	1m 36.475s	Palmer	1m 41.849s
Berger	1m 36.958s	Ghinzani	1m 43.412s
Johansson	1m 36.983s	Danner	1m 43.712s

STARTING GRID

Senna
Lotus Renault 98T
1m25.501s

Piquet
Williams-Honda FW11
1m26.266s

Mansell
Williams Honda FW11
1m26.800s

Arnoux
Ligier JS27
1m27.133s

Lafitte
Ligier JS27
1m27.190s

Alboreto
Ferrari F1/86
1m27.485s

Rosberg
McLaren MP4-2B
1m27.705s

Johansson
Ferrari F1/86
1m27.711s

Prost
McLaren MP4-2B
1m28.467s

Patrese
Brabham BMW BT55
1m29.294s

Dumfries
Lotus Renault 98T
1m29.503s

Fabi T.
Benetton BMW B186
1m29.748s

Tambay
Lola Hart THL 1
1m30.594s

De Angelis
Brabham BMW BT55
1m31.074s

Boutsen
Arrows BMW A8
1m31.244s

Berger
Benetton BMW B186
1m31.313s

Brundle
Tyrrell-Renault 014
1m32.009s

Streiff
Tyrrell-Renault 014
1m32.388s

Jones
Lola Hart THL1
1m33.236s

Surer
Arrows BMW A8
1m33.781s

Palmer
Zakspeed 861
1m33.784s

De Cesaris
Minardi M185B
1m34.646s

Ghinzani
Osella FA1-G
1m35.988s

Danner
Osella FA1-G
1m36.558s

Nannini
Minardi M185B
1m37.466s

SUCCESSIVE LEADERS

Laps 1-2: **Senna**
Laps 3-18: **Piquet**
Lap 19: **Senna**
Laps 20-26: **Prost**
Laps 27-40: **Piquet**
Lap 41: **Senna**
Laps 42-61: **Piquet**

CONSTRUCTORS' WORLD CHAMPIONSHIP POINTS

(After Brazil)

1. Williams	9 points
2. Ligier	7 points
3. Lotus	6 points
4. Tyrrell	2 points
5. Benetton	1 point

DRIVERS' WORLD CHAMPIONSHIP POINTS

(After Brazil)

1. Piquet	9 points
2. Senna	6 points
3. Laffite	4 points
4. Arnoux	3 points
5. Brundle	2 points
6. Berger	1 point

DRIVERS	TEAMS	CONSTRUCTORS	QUALIFYING TIMES	
1. Prost	McLaren International	McLaren MP4-2C/3 (T: MP4-2C/1)	1m28.487s	1m28.099s
2. Rosberg	McLaren International	McLaren MP4-2C/2	1m28.763s	1m27.705s
3. Brundle	Tyrrell Ltd	Tyrrell 014/3 (T: 014/1)	1m32.983s	1m32.009s
4. Streiff	Tyrrell Ltd	Tyrrell 014/2	1m35.669s	1m32.388s
5. Mansell	Williams GP Ltd	Williams FW 11/02 (T: FW11/01)	1m27.046s	1m28.749s
6. Piquet	Williams GP Ltd	Williams FW 11/03	1m26.266s	1m26.755s
7. Patrese	Olivetti Brabham	Brabham BT55/1 (T: BT55/2)	1h00m25.561s	1m29.294s
8. De Angelis	Olivetti Brabham	Brabham BT55/3	1m31.682s	1m31.074s
11. Dumfries	John Player Team Lotus	Lotus JPS 98T/2 (T: 98T/1)	1m30.452s	1m29.503s
12. Senna	John Player Team Lotus	Lotus JPS 98T/3	1m26.983s	1m25.501s
14. Palmer	Zakspeed Formula Racing	Zakspeed 861/2 (T:861/1)	1m35.119s	1m33.784s
15. Jones	FORCE Lola	Lola THL1/002 (T: THL1/1/001)	1m33.664s	1m33.236s
16. Tambay	FORCE Lola	Lola THL1/003	1m31.429s	1m30.594s
17. Surer	Arrows Racing Team Ltd	Arrows A8/2 (T: A8/6)	1m33.781s	1m34.144s
18. Boutsen	Arrows Racing Team Ltd	Arrows A8/4	1m32.911	1m31.244s
19. Fabi T.	Benetton Formula Ltd	Benetton B186/03 (T: B186/01)	1m31.138s	1m29.748s
20. Berger	Benetton Formula Ltd	Benetton B186/02	1m31.653s	1m31.313s
21. Ghinzani	Osella Squadra Corse	Osella FA1G/85/01	1m38.165s	1m35.988s
22. Danner	Osella Squadra Corse	Osella FA1G/85/02	1m39.389s	1m36.558s
23. De Cesaris	Minardi Team Spa	Minardi M185B/002 (T: M185B/004)	1m37.835s	1m34.646s
24. Nannini	Minardi Team Spa	Minardi M185B/001	1m40.739s	1m37.466s
25. Arnoux	Ligier Sport	Ligier JS27/02 (T: JS27/03)	1m30.563s	1m27.133s
26. Laffite	Ligier Sport	Ligier JS27/01	1m30.175s	1m27.190s
27. Alboreto	Ferrari Spa	Ferrari/F1-86/088 (T: 156-85/085)	1m30.156s	1m27.485s
28. Johansson	Ferrari Spa	Ferrari/F1-86/087	1m30.363s	1m27.711s

FINAL RESULTS

1. Piquet (Williams-Honda) 61 laps or 306.891 km/191.807 miles in 1 hour 39m 32.583s at an average speed of 184.980 kph/115.612 mph.
2. Senna (Lotus-Renault) 1 hour 40m 07.410s.
3. Laffite (Ligier-Renault) 1 hour 40m 32.342s.
4. Arnoux (Ligier-Renault) 1 hour 41m 01.012s.
5. Brundle (Tyrrell-Renault) 60 laps.
6. Berger (Benetton-BMW) 59 laps.
7. Streiff (Tyrrell-Renault) 59 laps.
8. De Angelis (Brabham-BMW) 58 laps.
9. Dumfries (Lotus-Renault) 58 laps.
10. Fabi (Benetton-BMW) 56 laps.
Track Lap Record: Piquet (Williams-Honda) 1m 33.546s at an average speed of 193.612 kph/121.007 mph.

Starting grid (Brazilian GP 1986) DPPI

SENNA WAS THE ONLY ONE TO BEAT THE 1m 26s BARRIER IN QUALIFYING. PIQUET SPAN INTO THE RAILS ON HIS ATTEMPT

René Arnoux (Ligier JS27) DPPI

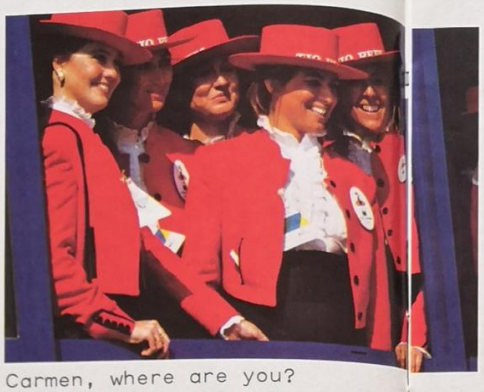
ARNOUX LEADS JOHANSSON, HIS REPLACEMENT AT FERRARI DURING 1985. SWEET REVENGE FOR THE LATEST LIGIER RECRUIT

Teo Fabi (Toleman/Benetton B186) Photo A. Marzoli

THE BENETTONS HADN'T JUST COME TO RIO TO LOOK PRETTY: BERGER EARNED A POINT AND FABI SET 2ND FASTEST LAP— TIME

POSTCARD

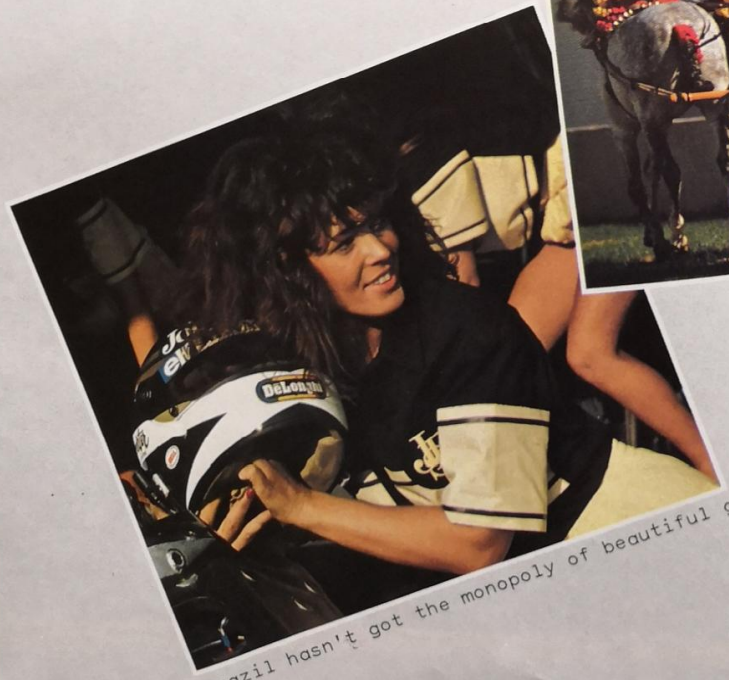
I'm sure I saw a 'real' postcard like this.



Carmen, where are you?

Wily Ken has apparently found a way round the 195 litre fuel limit.

Jerez



Brazil hasn't got the monopoly of beautiful girls.

The latest Lotus bodies were unveiled in Spain.

Cast not a clout 'til May is out.

SENNA, BUT ONLY JUST

ALL THAT SEPARATED SENNA AND MANSELL AFTER 304 KM OF COMBAT WAS ONE STEP ON THE ROSTRUM AND 95 CENTIMETRES OUT ON THE CIRCUIT. FOR ONCE, THEY WERE BOTH ABLE TO CONTAIN THEIR MUTUAL HOSTILITY AND GET ON WITH THE JOB OF RACING. OFF THE TRACK IT WAS A DIFFERENT STORY.

by Bob Harrap

ANALYSIS

The friction that exists between Ayrton Senna and Nigel Mansell is no secret and one only has to look back at the Australian and Brazilian Grands Prix to see that no love is lost between the two drivers. On each occasion, the Brazilian driver's tactics as he endeavoured to thwart Mansell's attempts at overtaking were a little over-enthusiastic to say the least. The tables were turned at Jerez.

As drivers awaited the start of the race, Senna climbed out of the Lotus's cockpit, took off his helmet and gloves and went up to say a few words in Mansell's ear. The Brit remained totally impassive, his hands gripping the Williams' steering wheel, as Senna leant over. *"Don't try anything silly, Nigel. There's no point in trying to win the race at the first bend this time, there's 72 laps to do..."* Mansell didn't flinch and a few seconds passed before he retorted something inaudible. *"After the incident in Rio,"* explained Senna later, *"I had expected him to come and ask me to justify my tactics. He didn't do that, so it was me that approached him on the grid to clear the air. His reactions surprised me and I admit that I was a little scared of him at the start. When Nigel eventually passed me, I made no effort to resist but, when it was my turn to challenge him, it was a completely different story. He seemed to be waiting for me. I attempted without success to get past at each of the four easiest overtaking points. Consequently I tried a fifth spot where nothing had yet been tried and succeeded, basically because Nigel wasn't expecting me... That didn't stop him from trying to shut the door on me and our wheels touched."*

After the race, Senna and Mansell were taken from the paddock to the rostrum in the same courtesy car and found themselves sitting next to each other on the back seat. Mansell took the Brazilian driver by the collar of his overalls and shouted, *"You ran into me again today, kid."* To which Senna replied after a short silence, *"And you closed the door in my face on more than one occasion, so you can shut up..."*

Less than a metre, but also many other things separated the two impetuous drivers as they crossed the finish line but both deserve a great deal of credit for their display in Spain. *"It was indeed a difficult race,"* continued the Lotus driver. *"I suffered as a result of excessive fuel consumption and tyre wear. Seven laps from the end, my rear left tyre was totally finished. I nearly went off on the penultimate lap, it was like driving on ice."* According to 'well informed sources', only a litre and a half of petrol remained in the reservoir of the Lotus at the end of the race and the British team will no doubt have to take a close look at the problem before the San Marino GP at Imola in a fortnight's time. *"In any case,"* admitted Senna, *"if the finish line had been just twenty metres further on, Mansell would have won. God, it really was a difficult race, you had to concentrate 100% on consumption from start to finish and then, towards the end, I also began to feel extremely shattered physically. I suffered badly with my back. As far as the engine is concerned, it's true that we lack a bit of power, especially on acceleration out of bends. I was forced to compensate elsewhere."*

And compensate he did. Senna is under no illusions for the rest of the season. *"It's going to be between the two Williams, the two McLarens and myself."* The McLarens of Prost and Rosberg fared better in Spain than in Brazil. The problem of weak air/fuel mixtures on the two cars had been eliminated but at the expense of increased fuel consumption. *"My computer informed me that I only had 1 litre left at the finish,"* pointed out Prost. *"But something must have been wrong with it because the car weighed in at 556 kg after the race, ie 16 kg over its normal weight. That's the equivalent of around 12 or 13 litres. My biggest problem here was the tyres, especially the rear left like everybody else. About 20 laps from the end, I signalled to my pits that I intended changing tyres but I changed my mind when I noticed that I was catching the others at a rate of a second a lap. It was a mistake which I regret but I've only got myself to blame. I feel a little frustrated now the race is over. I believe that, if I had gone ahead and changed tyres and if my computer had given me an accurate idea of how much fuel I had left, I could have obtained a better result. Taking my computer's estimation as the truth, I completed the last laps at reduced turbo pressure. One interesting indication to come out of the Spanish GP is that the Hondas can be beaten. I think we could be in for a few surprises in the races to come."*

Senna's pole-position was the ninth of his career and the hundredth for Lotus.

Rosberg too could have hoped for a better result had he not forgotten to reduce turbo boost after switching to maximum to overtake Mansell on lap two! Imagine what the Finn must have felt as he glanced at the computer's fuel figures some time later. With boost down to an extremely conservative level, the pace of the second McLaren dropped considerably, to the extent that Rosberg found himself a lap behind. Once his fuel situation had become healthier and once fresh tyres had been fitted to his car, Rosberg was able to drive in his usual style and even recorded second fastest lap-time on lap 61. But it was far too late to do anything about catching up with the leading trio.

It was too late also for Mansell who elected to change his Goodyears on lap 63 when the Williams had become totally undrivable. During the tyre change, the Williams mechanics noticed the real reason behind Mansell's sudden handling problems; a piece of metal had pierced the rear right tyre causing a slow puncture. Mansell, his mind concentrated on fending off Senna, had not even noticed. *"The tyre change only took 8.7 seconds,"* he pointed out. *"The mechanics did a great job but even that was too long. When I got back onto the circuit, I was 19 seconds adrift. It was relatively easy for me to catch Prost but I easily lost 4 seconds in trying to get past him."* Those four seconds meant that the British driver had to quicken his pace even further if he was to stand any chance at all of catching Senna's Lotus. In an all out final effort, Mansell caught Senna on the last bend, drew level with the Lotus and was still accelerating as they crossed the line. Convinced that he had pipped his rival at the post, Mansell even gave the thumbs up sign to Patrick Head who was watching from the trackside. But no. He would have to make do with second place. Obviously disappointed, the Williams driver hadn't lost his sense of humour, *"I hope Frank enjoyed watching all that on television!"*

For Ferrari, the trip to Spain proved to be as fruitless as the Rio outing two weeks before and brake problems, possibly even more serious than those encountered in Brazil, were the reasons for the retirements of both Alboreto and Johansson. Things were no happier in the Ligier pits where both cars were in with a realistic chance of scoring points had half-shaft failure not decided otherwise for Laffite and Arnoux. The French team will no doubt want to understand exactly what happened before Imola. Arnoux, however, had already lost all hopes for a good result when a problem with the JS27's injection retained him in the pits for a long while. Once back on the track, the Frenchmen set a new lap record which was to last for quite a long time. *"They are the same half-shafts we used in Rio,"* pondered Michel Tetu, Ligier's engineer. *"Perhaps they had to work harder here as a result of the bumpy surface, the more twisty nature of the circuit and the shorter gear ratios we were using here."*

"We finished well in Brazil despite not being able to match the rhythm of the others," added Arnoux. *"Here we were very competitive but neither of us finished. I suppose it's a question of striking a happy medium."*

Had Mansell called in at his pits just one lap earlier to change tyres he would probably have won the Spanish GP.

The race really came alive after two-thirds of its distance when Mansell, Senna and Prost were grouped within less than a second.

CIRCUITO DE JEREZ, NOT EVERYBODY'S CUP OF TEA

At one stage it looked doubtful whether the ambitious undertaking of finishing the brand new Jerez circuit in time for the race was going to be achieved. However, as everybody started to arrive, the sight that met them in the middle of the otherwise deserted Andalusian Plains was simply dazzling. The circuit's layout gave drivers the opportunity to test their skills over a succession of interesting curves, the recently surfaced track lined with magnificent new stands each with an ideal view of the race. The only apparent criticism to meet the eye was the narrowness of the track which offered few chances for overtaking. The paddock was vast, parking lots were well laid out and the surroundings were very pleasant indeed. At first sight, the initiative of three men, the chairman of Tio Pepe wines, the President of Andalusia and the Mayor of Jerez was a success. Nine months of intensive work and an announced investment of ten million dollars had transformed a for-

There were no major technical modifications to mark the return of Formula 1 racing to Spanish territory, only a few minor alterations plus the planned debut race of the Tyrrell 015.

TYRRELL

CHASSIS	DRIVER
015/1	Brundle
014/2	Streiff
014/4	Spare

As announced by Ken Tyrrell (see PADDOCKS), Brundle was given the task of putting the 015 through its paces whilst Streiff persevered with the 014.

WILLIAMS

As a result of his off on the Friday morning, Piquet was forced to make do with the spare car. FW11/01 was considered to be irreparable after the hammering the underneath of the chassis had received over the rubbing strips and the British team even considered flying a new chassis over from England during the night. The mechanics were eventually able to repair the damage but Piquet preferred to keep the spare car for the weekend.

BRABHAM

The Brabham team had stayed on in Brazil after the GP at Rio in order to further develop the BT55. The three days were spent in the company of BMW technicians in an effort to pin-point the source of the problems which were effecting the engine. Particular attention was paid to the cooling system and the combustion chambers. However, for the Spanish GP, only the inlet manifold had been modified and was mounted a couple of centimetres higher thanks to the fitting of longer trumpets. As a result, the manifold was situated proud of the shell and exposed to the cooling effect of passing air. On the Thursday, only De Angelis' car was modified in this way but, by Friday morning, all three BT55s had been altered.

LIGIER

Michel Tetu preferred to use the circuit of Nogaro in the south-west of France to set up the Ligier JS27s for Jerez. Laffite was able to put in a hundred or so laps on the twisty French circuit in a car fitted with a curious looking rear wing, the result of wind-tunnel research. A secondary profiled wing had been mounted in the hollow of the main wing to increase downforce and to improve motricity. Once in Spain, however, Arnoux reverted to the original wing design on the grounds that top-speed would be vital on the Jerez circuit. Guy Ligier was also fortunate enough to have one of the latest Renault DP engines (pneumatic timing) available in race specification but was in a bit of a quandary as to which driver should be given the privilege of using it. Eventually, the honour went to Laffite.

FERRARI

CHASSIS	DRIVER
F1-86/087	Johansson
F1-86/088	Alboreto
F1-86/089	Spare

As usual, the Scuderia had put in a lot of testing at their Fiorano circuit in an effort to iron out the weaknesses of the new F1/86. The flexible fuel-pump drive belt was judged too fragile and has been replaced by a shaft drive with universal joints. No signs though of the Marzocchi gas-filled dampers many people were expecting. A new wing, mounted between the principal wing and the extractor, has made an appearance.
After a weekend of transmission failures, fires caused by fuel and oil leaks and far from perfect handling characteristics, the Spanish GP will not go down in history as the most successful for the Italian team.

LOTUS

Nothing much new on the Lotus 98T except for slightly bigger inlet manifolds. The British team had no difficulty housing them under their engine covers but the Ligiers will have to be adopted when the modification is eventually adapted by the French team.

The Tyrrell 015 was due to make its debut in Spain but an accident during practice meant that Brundle was forced to start with the 014.

Tambay lost ground early on with brake problems but finished 8th.

Berger took his Benetton into the points for the second time of the season whilst Fabi recorded third fastest lap-time, also for the second time.

merly rich and green pasture land for herds of magnificent local bulls into one of the world's most modern F1 circuits.
In an effort to produce an original yet interesting layout, the designers had conceived a twisty, technical circuit where drivers would always have to be on the alert. The initial computer predictions concerning lap times and average lap speeds confirmed that: Maximum speed was, according to the said computer, going to be in the region of 265 kph and an expected average speed of 135 kph would mean lap times in the order of 1m 52s. On the basis of those calculations, Jerez was likely to resemble Monaco.
FOCA had taken care to organise an introductory untimed practice session on the Thursday afternoon so that teams and drivers would have a chance to become acquainted with the new site. Immediately it was clear that the computer had got its sums completely wrong, the true nature of the Jerez circuit being much faster than believed. Prost immediately put the picture straight by putting in a lap of 1m 25.446s, an average speed of 177.712 kph! Everybody's tactical approach to the Spanish GP had to be revised literally overnight. Suddenly everybody's opinion changed. The track was no longer twisty but tortuous, lacking in rhythm, its only straight too short to give the drivers a chance for a breather. No longer just narrow in parts, it had become narrow everywhere, and excessively so. Trackside security was at first considered to be ample but suddenly gave cause for

Arnoux briefly held the lap record before retiring with transmission failure.

alarm, the bump on exit from the hairpin took on the aspect of a door step. *"Everything could have been perfect here,"* pronounced Piquet, *"if only they had spent just a bit more money. As it turns out, the circuit resembles a Spanish motorway, really bumpy. It's a pity."*
Prost was more precise. *"The circuit is not totally without interest but there remain a number of serious faults to clear up and some spots are lacking in security. There are some bends where we will be approaching at something like 230 or 250 kph and there is just a wall of concrete in front of us. Whilst they could still have come up with a twisty, technical circuit, I think the organisers should have made more use of the space available. I get the feeling that Formula 1 has come to Jerez a bit too early..."*
"Six months too early," pitched in Jacques Laffite. *"It's clear that they're not yet fully ready for us. The place reminds me of the new Nurburgring. It's too easy. What I mean is that with the same tyres, the same engine, etc,the two drivers of any one team put in very similar times. It is an indication that the circuit is not sufficiently selective. You just have to get on with the job of accelerating as early as possible and braking as late as possible and that's about all. There's no interest in that. Nevertheless, it's better here than at Detroit or Monaco.*
"I think it's a shame though that they didn't ask the drivers for their advice.

With fresh tyres, Mansell passes Prost on the inside before tearing away in hot pursuit of Senna.

Fourteen thousandths of a second and 95cm were all that separated Mansell and Senna in one of the closest finishes in the history of F1.

For FOCA to organise, sorry, promote a Grand Prix race in a part of the world where the stands were more or less bound to be empty, it is possible that TV rights are becoming the deciding factor in the choice of venues for F1 races. Maybe we'll know for sure one day but the sad truth is that there can't have been more than 12,000, 15,000 maximum, spectators at the first Grand Prix to be held on the brand spanking new Jerez circuit where most of the specially built stands were deserted.

Despite a fairly strong prevailing wind and relatively cool temperatures, race conditions were near ideal. In any case, the sky was blue. A handful of drivers, however, were more concerned about their cars than the weather as the warm-up lap got underway. Rosberg, whose Porsche engine had shown signs of weakness, was obliged to start with the spare McLaren, the Renault block on Arnoux's Ligier was changed shortly before the race after the original had blown during the Sunday morning practice and Nannini's race came to an unceremonious halt after only a few yards when the differential of his Minardi failed at the start of the warm-up lap.

As the green light came on, Senna, Piquet and Mansell took off together, each closely observing the other two. Rosberg, Prost and Arnoux followed whereas Berger, well placed on the grid, got his start mixed up. Fabi pulled level but Laffite sneaked in between the two Benettons. There was contact between his Ligier and Fabi's car, the Italian driver losing the left corner of his front wing in the incident. Another, more serious clash occurred on the first lap when Jones rammed Palmer's Zakspeed under braking for a hairpin, putting an early end to both drivers' races. Senna had made the most of his pole-position advantage by taking the lead and the Brazilian prodigy looked determined to conserve it whilst his principal opponents formed an orderly queue behind him. Orderly, that is, except for Rosberg who managed to get past Mansell at the end of the main straight. Senna, Piquet, Rosberg, Prost, Mansell, Arnoux, Laffite that was the order as the race settled down into a multi-coloured procession given the rare chances for overtaking that the Spanish circuit offers. Most drivers' minds must have been on fuel economy, they'd see about the race later. After ten laps, only four and a half seconds separated the seven pace-setters. The Ferraris of Johansson and Alboreto were driving together, slightly adrift of the leading bunch whilst Berger and Dumfries were already 26 seconds behind Senna.

Suddenly, as many onlookers got down to the serious business of dozing, we were brutally awakened by an equally brutal accident on the far side of the circuit. Johansson, brakeless, was unable to negociate the hairpin and left the track. Stunned in the incident, the Ferrari driver collapsed on the ground as soon as he had got out of the cockpit, but, after a short visit to the circuit's medical centre, the Swede was soon back spectating... We could close our eyes again. Senna, 0.87s ahead of Piquet, 1.64s ahead of Rosberg, 2.23s ahead of Prost, 2.93s ahead of Mansell, 3.61s ahead of Arnoux and 5.21s ahead of Ligier. What else is there to say?

20 LAPS

Senna 30m 25.089s; Piquet 30m 26.749s; Rosberg 30m 27.963s; Mansell 30m 28.308s; Prost 30m 28.879s; Arnoux 30m 30.996s; Laffite 30m 36.641s; Alboreto 30m 49.456s; Berger 31m 10.054s; Dumfries 31m 15.536s; Brundle 31m 15.770s; Boutsen 31; 22.098s; Surer 31m 25.373s; Streiff 31m 28.967s; Fabi 31m 32.976s; De Angelis 19 laps; Tambay 18 laps.

Senna narrowly missed De Angelis as the Brabham driver was in the process of leaving his pits (the pit-lane joins the circuit at the end of the straight, at a point where drivers are on line for the following right-hander), Mansell got past Prost on the inside on lap 19, a relatively daring manoeuvre and arguably a little excessive for that stage of the proceedings, and Alboreto called in at his pits. Although the race was still young, it looked as though the Italian was about to change tyres but, in fact, the Ferrari's brakes were causing Alboreto problems and he decided to call it a day.

30 LAPS

Senna 45m 23.723s; Piquet 45m 25.959s; Mansell 45m 27.392s; Rosberg 45m 28.836s; Prost 45m 30.183s; Laffite 45m 37.011s; Berger 46m 31.005s; Brundle 46m 35.313s; Dumfries 46m 41.159s; Boutsen 29 laps; Surer 29 laps; Fabi 29 laps; De Angelis 29 laps; Tambay 27 laps.

On lap 24, René Arnoux, until then firmly in control of sixth place, free-wheeled into the Ligier pits. The electronic management was changed, the engine was quickly checked and the French driver was able to restart, before stopping for good on lap 30 with half-shaft failure. There were still no surprises out front as everyone seemed to concentrate on the consumption figures being dished out by the onboard computers, a theory apparently confirmed by the unchanged gaps between the leading drivers. After 27 laps, Senna was still in command, 1.39s in front of Piquet, 1.73s ahead of Rosberg, 2.60s ahead of Mansell whilst Prost was only 3.28s adrift of the Lotus driver. Laffite, however, seemed to be dropping back. Still sixth, the Frenchman was now 13.41s behind Senna. Visibly in difficulty, his signals to the Ligier pits gave no clue as to what his problem was. Behind him there was an enormous gap. After the retirements of the two Ferraris, Berger was 7th, just over a minute behind the leading Lotus! Brundle, Dumfries and Surer followed, the Swiss driver handicapped by a fuel leak in the cockpit.

40 LAPS

Mansell 1 hour 00m 21.187s; Senna 1 hour 00m 22.704s; Prost 1 hour 00m 28.696s; Rosberg 1 hour 00m 33.360s; Laffite 1 hour 01m 17.665s; Berger 1 hour 01m 50.153s; Brundle 39 laps; Dumfries 39 laps; Fabi 39 laps; Boutsen 38 laps; Tambay 36 laps.

The leading pack seemed to be as drowsy as us but, unconsciously at first, we steadily became aware that those in Senna's wash were becoming a little impatient and pressure seemed to be building up as some drivers began to get bored with following the pace of the Lotus. Mansell was first to give way to the desire to get things moving and the British driver made a successful assault on Rosberg. Once past the Finn, the British driver closed in on his Williams team-mate, passing Piquet on lap 33. Prost overtook his fellow McLaren driver on the same lap, outbraking Rosberg at the end of the start/finish straight, the only really safe place to get past. Two tasty duels were in the making as Mansell sped off in pursuit of Senna whilst Prost closed in on Piquet. At last, the Spanish GP was turning out to be a real race. Mansell only took five laps to get in front of a Senna lost in deep thought as he tried to work out how his fuel consumption was going. The show-down between Prost and Piquet did not come about however as the Brazilian's Honda engine began to chew up its pistons before retiring in a cloud of smoke. In the space of the 40th lap, the entire pattern of the race had changed. Mansell was pulling away and Prost was catching Senna. The Williams driver's lead over the Brazilian progressed from 1.15s after 40 completed laps to 3.93s after 42 laps, to 4.05s after 44 laps and to 4.46s after 48 laps.

50 LAPS

Mansell 1 hour 15m 14.971s; Senna 1 hour 15m 17.846s; Prost 1 hour 15m 20.837s; Rosberg 1 hour 16m 10.092s; Dumfries 49 laps; Berger 49 laps; Fabi 49 laps; Boutsen 47 laps; Tambay 45 laps.

Suddenly the Williams began to lose time. The gap dropped to 3.94s, then to 2.87s and was at 1.23s at the end of lap 52. Mansell was prey for Senna. What were the reasons for this sudden change-around in the situation? Had the Renault engine unearthed some extra horsepower that had been hiding in a corner or had Senna increased turbo-boost as a result of Prost's pressure? In fact Mansell was beginning to suffer with his tyres. The Lotus driver made a first attempt at passing the ailing British driver but was handicapped as they came across a number of slower competitors, including Rosberg who was still 4th but now in the process of being lapped.

60 LAPS

Mansell 1 hour 30m 24.655s; Senna 1 hour 30m 25.032s; Prost 1 hour 30m 26.196s; Rosberg 59 laps; Fabi 59 laps; Berger 59 laps; Boutsen 57 laps; Tambay 55 laps.

On lap 59, Senna gave it everything he had, including trying to pass Mansell on the outside of the right-hander after the pits! Perhaps he was a little wary that the British driver might be out for revenge for Rio if he tried to pass on the inside. His first attempt having failed, he tucked in behind the Williams rear wing and waited for another opportunity. Mansell's problems were visibly worsening and, on lap 62, Senna began to get very impatient, especially since Prost was sitting menacingly on the Lotus's tail. Senna sneaked past Mansell on the inside, the British driver resisted and blocked the Lotus. It was Rio all over again, with the roles changed. Mansell, however, knew that he wouldn't be able to resist for much longer and, without reducing speed, let Senna through and headed directly for the pits to fit fresh tyres. The Lotus was not only in the lead but was even pulling away from Prost who was beginning to wonder if he was going to have enough fuel to finish. Indeed, he offered only limited resistance when Mansell, now with four new tyres, pushed to get past four laps from the end of the race before closing on Senna like a rocket. His fantastic come-back culminated in a last ditch attempt to overtake the Brazilian driver as both cars headed for the finish line. The tension was tremendous but the circuit turned out to be 10 yards too short for Mansell who, although able to draw alongside Senna's Lotus, was pipped by just 14 thousandths of a second.

70 LAPS

Senna 1 hour 45m 44.839s; Mansell 1 hour 45m 50.193s; Prost 1 hour 45m 57.254s; Rosberg 69 laps; Fabi 69 laps; Berger 69 laps; Boutsen 66 laps; Tambay 64 laps.

I wouldn't mind betting that the dwindling interest of many F1 fans has been rekindled by the fantastic finish to the Spanish GP.

It's going to be hell trying to overtake and it's inadmissible to have bumps on a brand new surface. Incredible. There are some points where the track is lined by a ditch with neither rails nor a wall to retain you. There's just this ditch where any driver unfortunate enough to lose control of his car would risk being crushed if he rolled. Just now, I noticed that the foot of some scaffolding was only protected by five skinny tyres piled on top of each other. No, it's not right coming to a circuit which is still in the process of being built."

The running of the meeting came in for some criticism too. Nothing serious, but regretful nevertheless. Thursday's untimed practice was interrupted for half an hour not long after it had started and a further hour towards the end to allow cranes to go and recuperate cars stranded out on the circuit. There was a delay of over an hour and a half on the Friday morning when marshalls were denied access because they didn't have the right passes. Finally, the stadium has been built a long way from the nearest important centre of population and one wonders why so many magnificent stands had been erected. Possibly there would be more spectators for the race. Quite a contrast after Jacarepagua!

THE HUNDREDTH POLE FOR LOTUS

Getting on to the more traditional subject of qualifications, nothing much seemed to have changed. As usual, Senna was fastest and, as is becoming a habit now, his fastest time was obtained during the final minutes of timed practice:

Strapped into the black and gold Lotus, Senna exchanged a last few words with Ducarouge, dropped his visor and sped off out onto the circuit with his first set of qualifying tyres. Very soon he was back. The suspension settings needed revising but, with very little time availble, the mechanics pointed out that nothing could be done. A lap later, Senna was back again. The rear tyres were changed and Senna left the pits for the third time. The time was announced; 1m 21.605s! And in the nick of time,too. A minute later, the chequered flag was brought out to mark the end of qualifying. There was nothing his rivals could do about it. This time, though, the Brazilian driver's winning time just as the bell went was not the result of cool cunning but something which was forced upon him. Following a problem with the oil filter, his engine needed to be changed and the operation took up all of the interval between untimed and timed practice and much of timed practice itself. As they worked on the engine, the mechanics could not get on with the job of setting up the suspension properly. When Senna eventually got back out onto the circuit, it was an impressive sight to see the shower of sparks thrown up by the Lotus as the car bottomed more or less permanently. Unaware, or unconcerned, of the firework display he was creating, Ayrton kept his foot down. *"It wasn't easy setting a fast time in those circumstances,"* he admitted. *"my Lotus was bottoming everywhere and, in the faster curves, she was a handful to control. It was the best I could manage though with the chassis set up like that and with the traffic there was. In ideal conditions I think I could take a second off my time."*

We were a long way from the computer's initial predictions.

It was the hundredth pole-position in the history of the British-based Lotus team, the ninth of Senna's career and his third in succession. The principal reasons for this particular stunning time would appear to be the excellent health of the latest Renault DP engine in qualification specification, the undoubted talents of the young Brazilian star, a wise combination of different grades of rubber and the luck of having a clear run. His plan was to take things gently on soft tyres for two laps in order to get them up to working temperature before fitting hard racing rubber to the rear for his pole-position winning lap. The ruse had been kept secret to avoid anybody else trying the same trick! Berger was fastest of the Pirelli shod cars whereas the Brabhams continued the development of the BT55. The turbos of the spluttering BMW blocks were changed every now and again but neither that nor the modification of the engine management settings seemed to do any good. The Ligiers were suffering from incessant problems with their Renault DP qualifying engines which started when Arnoux's car dropped a valve as it was started and continued as nobody succeeded in getting the spare car started at all. All the Frenchman could do was patiently await the return of his team-mate Laffite who was busy putting up a moderate 8th fastest time. As soon as he arrived back at his pits, Arnoux jumped into the car and used up his two sets of qualies in one go. With the first set he managed 6th fastest but his second set was wasted when poor De Angelis got in his way. Main debate within the Ligier camp in Spain was which driver was to get the solitary race-spec DP engine available to the French team. Guy Ligier was spared the difficult situation of having to chose one driver when Arnoux respectfully stepped aside and offered the engine to his team-mate on the grounds that Laffite had been with the team longer. Ligier was prepared to let the drivers toss for it if they couldn't come to an agreement and at one stage even said that he would keep it under wrappings until the second engine was available.

As mentioned earlier, one of the major preoccupations of most teams was fuel consumption given that the circuit was indeed much faster than expected. *"Even on the basis of the organisers' predictions we were concerned about fuel economy,"* admitted Ducarouge. *"In the light of the times that have been put in during practice, we are now extremely worried."* In such circumstances, the advantages of having a free-revving engine like the Renault DP, which can rev to 13,000 rpm, are cancelled out unless, as Renault's Bernard Dudot pointed out, the driver is particularly vigilant in the sorts of engine speeds he runs at. In the light of Dudot's remark, maybe Arnoux's gesture was less altruistic than it first appeared.

The McLarens' seemed to be more at ease back in Europe and 4th and 5th places on the grid for Prost and Rosberg respectively were of immense encouragement to the reigning World Champion. *"As at Monaco, it is going to be very difficult to overtake here,"* he predicted. *"As a result, what happens at the start is going to be very important but I also think that the final result is far less certain than was possibly the case in Brazil. In my opinion, Jerez is a circuit which requires the all-round qualities of, why not, the McLaren. The balance of my car is perfect, even with a full reservoir and I should be able to complete the race on one set of tyres. The race is going to be a hard fought affair between the McLarens, the Williams and Ayrton's Lotus but another important factor will be physical fitness. The strain is going to tell."*

TELEX FROM JEREZ

● Teddy Mayer has decided to put his Lola/Hart chassis up for sale. Once the Beatrice team takes possession of the new Ford turbo engine, he will no longer have any use for them but the asking price is, as yet, unknown. There are likely to be two potential buyers: An Italian team (Jolly Club?) and the consortium of Australian business men which has given up the idea of taking over RAM's material to give Thackwell a Formula 1 drive.

● Talking of Jolly Club, if they ever do take possession of the Lola cars, that will leave French constructor, AGS, in a bit of a predicament. Their F1 project is at an advanced stage, the first carbon shells are shortly due to be produced and Henri Julien has also invested in a large number of ex-Renault Sport spares.

● There will be a second Zakspeed in the World Championship as from Imola, driven by Dutch driver, Huub Rothengarter.

● Tyrrell driver, Martin Brundle violently left the track during the Saturday afternoon's timed practice at the wheel of the latest 015. The British driver crashed against the rails which surrounded the Elf motorhome, causing a scare or two amongst the guests of the French petrol giant. *"When I started to feel the car go,"* admitted Brundle, *"I thought I was just going to spin, but I went onto the grass and there was nothing I could do to prevent the Tyrrell going into the rails. It was entirely my fault. I was surprised by the incredible power of the new Renault engine in qualification spec which I was using for the first time. Compared with the old version, nearly 300 extra horsepower are available!"* The British driver's surprise is understandable but the incident meant that the 015, its front suspension torn away, would have to wait another day to make its race debut.

Both Ferraris were forced to retire as a result of brake problems. Alboreto made it back to his pits but Johansson was slightly hurt when he span off on a hairpin.

LAP BY LAP

SPANISH GRAND PRIX

GRID POS.	12 1	6 2	5 3	1 4	2 5	25 6	20 7	26 8	19 9	11 10	28 11	3 12	27 13	7 14	8 15	14 16	15 17	16 18	18 19	4 20	21 21	17 22	22 23	23 24	24 25
Lap																									
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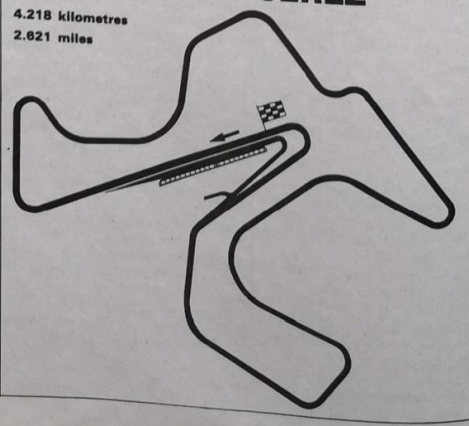
68	12	1	5	2	19	20	18																		
69	12	5	1	2	19	20																			
70	12	5	1	2	19	20																			
71	12	5	1	2	19	20																			
72	12	5	1																						

- Starting grip position
- On leader's lap
- 1 lap or more behind leader
- Pitstop
- Retired in the pits
- Retired on the track

CIRCUITO DE JEREZ

4.218 kilometres
2.621 miles



STATISTICS

SPANISH GRAND PRIX

Second round of the 1986 F1 World Championship
Date: April 13, 1986.
Circuit: Jerez.
Track Length: 4.218 km/2.636 miles.
Race Distance: 72 laps or 303.696 km/189.792 miles.
Weather: Warm and sunny with cold wind.
Attendance: 15,000.
Qualifying: 25. **Qualified:** 25. **Starters:** 25.
Finishers: 8. **Classified:** 8.

FOR THE RECORD

• First GP on new Jerez circuit in Spain • First 1986 F1 victory for Ayrton Senna • First points for Rosberg with McLaren • First official outing for the Tyrrell 015.

PREVIOUS WINNERS

(Last five editions)
1981: **Villeneuve** (Ferrari 126C) Jarama
1980: **Jones** (Williams FW07B) Jarama*
1979: **Depailler** (Ligier JS11) Jarama
1978: **Andretti** (Lotus JPS 79) Jarama
1977: **Andretti** (Lotus JPS 78) Jarama
* Not in championship

PIT STOPS

Lap 1: **Fabi,** changed front wing.
Lap 9: **Tambay,** brake pedal.
Lap 16: **De Angelis,** fresh tyres.
Lap 24: **Arnoux,** electronic management.
Lap 30: **Boutsen,** fresh tyres and to check engine.
Lap 31: **Fabi,** fresh tyres.
Lap 37: **Laffite,** fresh tyres.
Lap 45: **Berger,** fresh tyres.
Lap 58: **Rosberg,** fresh tyres.
Lap 63: **Mansell,** fresh tyres.

RETIREMENTS

Lap 1: **Nannini:** differential. **Jones** and **Palmer:** accident.
Lap 2: **De Cesaris:** differential.
Lap 9: **Patrese:** gearbox.
Lap 11: **Ghinzani:** engine.
Lap 12: **Johnasson:** accident after brake failure.
Lap 15: **Danner:** engine.
Lap 23: **Alboreto:** brakes. **Streiff:** engine.
Lap 30: **De Angelis:** gearbox. **Arnoux:** transmission.
Lap 40: **Piquet:** engine. **Surer:** fuel leak.
Lap 41: **Laffite:** transmission.
Lap 42: **Brundle:** engine.
Lap 53: **Dumfries:** transmission.

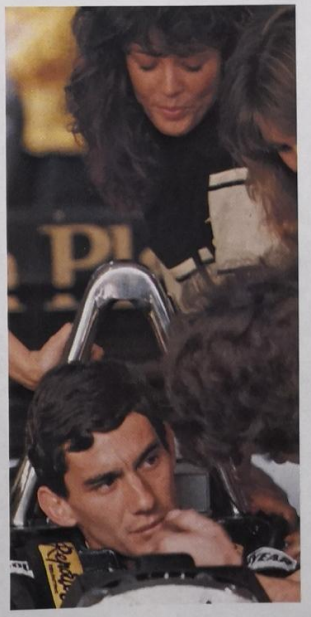
DRIVERS' WORLD CHAMPIONSHIP POINTS

(After Brazil and Spain)

1. **Senna**	6	+	9	=	15
2. Piquet	9	+	0	=	9
3. Mansell	0	+	6	=	6
4. Laffite	4	+	0	=	4
Prost	0	+	4	=	4
6. Arnoux	3	+	0	=	3
Rosberg	0	+	3	=	3
8. Berger	1	+	1	=	2
Brundle	2	+	0	=	2
Fabi	0	+	2	=	2

SUCCESSIVE LEADERS

Laps 1 - 39: **Senna**
Laps 40 - 62: **Mansell**
Laps 63 - 72: **Senna**



DRIVERS	TEAMS	CONSTRUCTORS	QUALIFYING TIMES	
1. Prost	McLaren International	McLaren TAG MP4-2C/3 (T: 2C/1)	1m23.702s	**1m22.886s**
2. Rosberg	McLaren International	McLaren TAG MP4-2C/2	1m23.948s	**1m23.004s**
3. Brundle	Tyrrell Ltd	Tyrrell Renault 015/1 (T: 014/4)	**1m25.831s**	1m41.361s
4. Streiff	Tyrrell Ltd	Tyrrell Renault 014/2	**1m27.637s**	1m28.096s
5. Mansell	Williams GP Ltd	Williams Honda FW 11/01	1m23.024s	**1m22.576s**
6. Piquet	Williams GP Ltd	Williams Honda FW 11/03	1m23.097s	**1m22.431s**
7. Patrese	Olivetti Brabham	Brabham BMW BT55/1 (T: BT55/2)	**1m26.231s**	1m29.911s
8. De Angelis	Olivetti Brabham	Brabham BMW BT 55/3	1m27.300s	**1m26.550s**
11. Dumfries	John Player Team Lotus	Lotus Renault JPS 98T/2 (T: 98T/1)	1m29.093s	**1m25.107s**
12. Senna	John Player Team Lotus	Lotus Renault JPS 98T/3	**1m21.605s**	1m21.924s
14. Palmer	Zakspeed Formula Racing	Zakspeed 86 1/2 (T: 861/1)	1m27.600s	**1m26.918s**
15. Jones	FORCE Lola	Lola Hart THL 1/002 (T: THL 1/001)	1m28.645s	**1m26.946s**
16. Tambay	FORCE Lola	Lola Hart THL 1/003	1m27.045s	**1m26.992s**
17. Surer	Arrows Racing Team Ltd	Arrows BMW A8/2 (T: A8/6)	1m28.803s	**1m28.443s**
18. Boutsen	Arrows Racing Team Ltd	Arrows BMW A8/4	1m28.112s	**1m27.169s**
19. Fabi	Benetton Formula Ltd	Benetton BMW B186/03 (T: B186/01)	**1m25.052s**	1m26.196s
20. Berger	Benetton Formula Ltd	Benetton BMW B186/02	**1m24.501s**	1m25.235s
21. Ghinzani	Osella Squadra Corse	Osella Alfa FA1G/85/01	1m28.894s	**1m28.423s**
22. Danner	Osella Squadra Corse	Osella Alfa FA1G/85/02	**1m29.046s**	–
23. De Cesaris	Minardi Team Spa	Minardi M185B/002 (T: M185B/004)	**1m29.195s**	1m53.811s
24. Nannini	Minardi Team Spa	Minardi M185B/001	–	**1m30.062s**
25. Arnoux	Ligier Sport	Ligier Renault JS27/02 (T: JS27/03)	1m24.566s	**1m24.274s**
26. Laffite	Ligier Sport	Ligier Renault JS27/01	**1m24.817s**	1m25.863s
27. Alboreto	Ferrari Spa	Ferrari/F1-86/088 (T: F1-86/089)	1m26.554s	**1m26.094s**
28. Johansson	Ferrari Spa	Ferrari/F1-86/087	**1m25.466s**	1m25.655s

THEIR FASTEST LAPS

Mansell	1m27.176s	Johansson	1m30.467s
Rosberg	1m27.991s	Dumfries	1m30.962s
Fabi	1m28.235s	Brundle	1m31.236s
Arnoux	1m28.332s	Boutsen	1m31.457s
Prost	1m28.497s	Tambay	1m31.512s
Laffite	1m28.504s	Surer	1m32.320s
Senna	1m28.801s	Streiff	1m32.240s
Piquet	1m29.182s	Patrese	1m33.212s
Berger	1m29.690s	Ghinzani	1m34.027s
De Angelis	1m30.201s	Danner	1m35.273s
Alboreto	1m30.201s	De Cesaris	1m52.175s

CONSTRUCTORS' WORLD CHAMPIONSHIP POINTS

(After Brazil and Spain)

1. **Lotus**	6	+	9	=	15
Williams	9	+	6	=	15
3. Ligier	7	+	0	=	7
McLaren	0	+	7	=	7
5. Benetton	1	+	3	=	3
6. Tyrrell	2	+	0	=	2

FINAL RESULTS

1. Senna (Lotus-Renault) 72 laps or 303.696km/189.792 miles in 1 hour 48m 47.735s at an average speed of 167.486kph/104.679mph.
2. Mansell (Williams FW11) 1 hour 48m 47.749s.
3. Prost (McLaren MP4-2) 1 hour 49m 10.287s.
4. Rosberg (McLaren MP4-2) 71 laps.
5. Fabi (Benetton B186) 71 laps.
6. Berger (Benetton B186) 71 laps.
7. Boutsen (Arrows A8) 68 laps.
8. Tambay (Lola Hart THL1) 66 laps.
Track Lap Record: Mansell (Williams Honda FW11) 1m 27.176s at an average speed of 174.186 kph/108.866 mph.

STARTING GRID

Senna
Lotus Renault 98T
1m 21.605s

Mansell
Williams Honda FW11
1m 22.576s

Rosberg
McLaren MP4-2B
1m 23.004s

Berger
Benetton BMW B186
1m 24.501s

Fabi
Benetton BMW B186
1m 25.052s

Johansson
Ferrari F1/86
1m 26.466s

Alboreto
Ferari F1/86
1m 26.094s

De Angelis
Brabham BMW BT55
1m 26.550s

Jones
Lola Hart THL1
1m 26.946s

Boutsen
Arrows BMW A8
1m 27.169s

Ghinzani
Osella Alfa FA1-G
1m 28.423s

Danner
Osella Alfa FA1-G
1m 29.046s

Nannini
Minardi M185B
1m 30.062s

Piquet
Williams Honda FW11
1m 22.431s

Prost
McLaren MP4-2B
1m 22.886s

Arnoux
Ligier JS27
1m 24.274s

Laffite
Ligier JS27
1m 24.817s

Dumfries
Lotus 98T
1m 25.507s

Brundle
Tyrrell Renault 014
1m 25.831s

Patrese
Brabham BMW BT55
1m 26.231s

Palmer
Zakspeed 861
1m 26.918s

Tambay
Lola Hart THL1
1m 26.992s

Streiff
Tyrrell Renault 014
1m 27.637s

Surer
Arrows BMW A8
1m 28.443s

De Cesaris
Minardi M185B
1m 29.195s

Nigel Mansell / Ayrton Senna DPPI

FROM 10cm AT THE START, THE GAP BETWEEN AYRTON AND NIGEL WAS 95cm AT THE END. IN REALITY, WORLDS APART

Alain Prost (McLaren) DPPI

PROST COULD WELL HAVE WON IF ONLY HE HAD FOLLOWED THROUGH HIS INTENTION TO CHANGE TYRES AFTER 60 LAPS

First bend (Spanish GP 1986) DPPI

PIQUET AND MANSELL COULD DO NOTHING TO STOP SENNA PU L AWAY AT THE START. THE WAITING GAME HAD BEGUN

GABRIELE CADRINGHER

THE SHERIFF OF FISA CITY

FOR TOO MANY YEARS THE MODEST TOWNSHIP OF FISA CITY HAD BEEN RUN IN THE TRUE STYLE OF A TRADITIONAL WESTERN COMMUNITY WHERE THE LAW WAS IN THE HANDS OF THE FASTEST GUNMEN. WHAT FISA CITY NEEDED WAS A NO—NONSENSE, HARD HANDED SHERIFF. THE AUTHORITIES CALLED IN GABRIELE CADRINGHER.

by Bob Harrap

The plot of this Western tale is classical stuff: Every fifteen days or so, the municipality of Fisa City organised a very special type of entertainment, a rowdy competition to which the inhabitants of a neighbouring township, Foca-Daisy Town, were cordially invited. The rules were clear, but one or two participants from Foca-Daisy Town had a nasty habit of interpreting them to their own advantage and examples of cheating were not unheard of during the festivities.

One of the games consisted of getting drunk as fast as possible on a particularly rasping old whisky which came in 20 gallon oak casks and which was donated by various local suppliers. Alcohol content was supposed to be strictly identical in all cases but some turned up with their own adulterated brews. Naturally, these spoil-sports needed to drink less of their personal fire-water to get drunk quicker than the rest and it was usually they that were declared the winners. Another game to be tarnished by the dishonest approach of the minority was the stage-coach races where wagons often didn't comply with the pre-defined rules.

Eventually the inhabitants of Fisa City began to tire of being beaten by such underhand tactics and some even began to think out devious plans to avoid being ridiculed by their unscrupulous neighbours. The mayor of Fisa City, Jean-Marie Balestre, tried in vain to calm down his voters by tracking down the culprits. But instead of approaching the problem diplomatically, he went in guns drawn preferring the bullet to the more nonbelligerent solution of negociation. To take one man prisoner, JMB didn't stop short of slaying three or four others. The effect of his crusade, however, was negligible. What was needed was a mercenary, a relentless but methodical bounty hunter, someone unknown in the county.

"IT'S A SHAME THAT NON-TURBOS NO LONGER HAVE THEIR PLACE IN F1"

Balestre chanced upon just the man whilst visiting a shoot out in a nearby state. He was impressed by the nerve of one of the officials who had no qualms whatsoever in excluding one of the leading stars who had failed to respect the rule book. A simple handshake and a round of drinks in the local saloon later, the mayor of Fisa City had at last found a sheriff worthy of the name, a man named Gabriele Cadringher.

"I HAD A GREAT DEAL OF DIFFICULTY GETTING MYSELF ACCEPTED BY THE TEAMS AT FIRST"

Cadringher arrived at dawn, the new day nothing more than a faint red glow in the sky over the rocky mountains. Unshaven, weary and covered in dust, his Ray Bans perched on his forehead, our hero was unarmed which only served to reinforce an impression of cool-headed, natural strength. A curious little yellow book replaced the usual Winchester on his saddle and, on the trail that led to Fisa City, our man could be heard reciting psalms from this modern day bible.

After endeavouring for four years to get an interview with him, the sheriff has finally consented to talk to GPI.

"Being a car fanatic, I used to go along to all the races. I was marshall before becoming scrutineer at Turin and I eventually graduated to national scrutineer with the Italian Federation which meant a lot of travel within Italy. In 1981, they asked me to go to Greece as scrutineer for the Acropolis Rally where I rejected the works Audi Quattros for illegal air intakes which had been disguised to look like headlights. By chance, Jean-Marie Balestre was around and he asked to make my acquaintance. A few weeks later he asked me to go to England to take a look at the latest Lotus 88B and its double chassis, before I was invited to go to the French GP as scrutineer. At the end of that same year, I was offered the job of Technical Manager with FISA. I accepted. It was to be a completely new way of life for me as well as for the Federation."

— Why did they elect to adopt a system with just one federal engineer? What was wrong with the old system?

"It was completely out of date. Before I started, it wasn't the Technical Commission that inspected cars at each GP but the national scrutineers of each organising country. The problem was that they only saw the F1 cars once a year, did not necessarily know the cars very well and, consequently, their opinions and judgements differed from country to country. A number of conflicts arose because of that."

— I presume not everybody was happy when you arrived on the scene?

"You're right. I had a great deal of difficulty getting myself accepted by the teams at first but the situation very quickly improved. Today we understand each other perfectly. We have a mutual confidence in each other which makes our working relationship perfect."

— What sort of problems did you have?

"Certain parties didn't like me because I am from Italy, especially the English who thought I was going to be biased against them. The Italians, on the other hand, were very pleased with the choice. Perhaps they believed I was going to favour them."

— Is your aeronautic background useful to you?

"Very much so. Some of the research I have to undertake is common to both activities, composite materials and strength calculations for example, although the techniques used in F1 have often been employed in aviation for some years.

— What were the most difficult problems you had to deal with?

"1982 was a very difficult year. There were the accidents of Villeneuve, Paletti and Pironi, there was a very tense atmosphere caused by the arrival of turbo engines and there was also the problem of water cooled brakes. 1984 was not easy either, what with the Tyrrell affair and all those court cases. These were all problems which needed to be handled with diplomacy and self-assurance, even if some of the more serious problems left us in direct conflict with certain teams.

— What, to your mind, leads a team to cheat? Is it a question of misinterpretation of the rule book or a desire to get one over on the governing body perhaps!

"Everybody tries their best to exploit the regulations to their advantage, in F1 and elsewhere. The initial fault lies with the FISA who laid down very precise technical regulations without making its power felt. FISA must make sure that its authority and competence are respected. At the beginning, certain people found it difficult to accept that motorsport should have real bosses."

— There was the Lotus double chassis, water-cooled brakes, temporary ballast... It must be difficult for you to deal with things like that.

"You're not kidding. The worse one to solve was indeed the twenty litre reservoir which was supposedly fitted to carry water for cooling the brake discs. Those twenty litres, ie twenty kilos, were emptied out onto the track on the first lap. It was a very clever idea. Last year there were the brake scoops which were, in reality, mobile aerodynamic devices, there was Ferrari's double wing, the adjustable flap on the Brabham's intercoolers on the Austrian GP... We've got to be prepared for everything, the imagination of the engineers is without limits. Having said that, I must say that the best ruse these last years was the double chassis on the Lotus 88. In a way it's a shame that the regulations didn't allow it... However, in general, the best ideas are often the simplest."

— Have you ever been tempted to design your own F1 car?

"That's a difficult one to answer. I think I'd buy a Lotus chassis, a Honda engine and Michelin tyres. I know that Michelin have pulled out but, to my mind, they are still superior. I would take on two of the best drivers and would be prepared to accept the presence of a sponsor, someone like Marlboro for example."

— Which two drivers?

"Prost and Piquet."

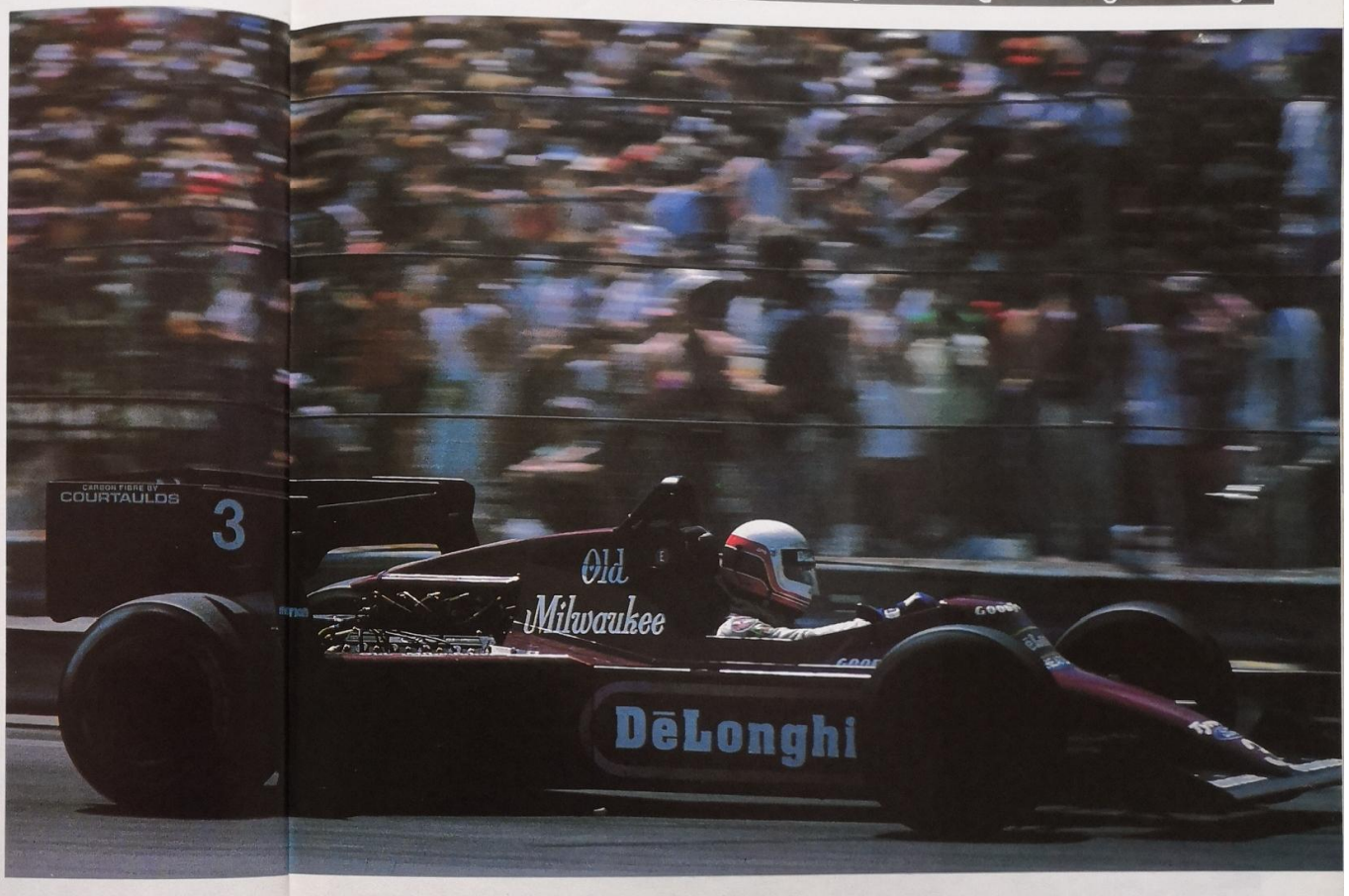
— Alboreto?

"...Lauda."

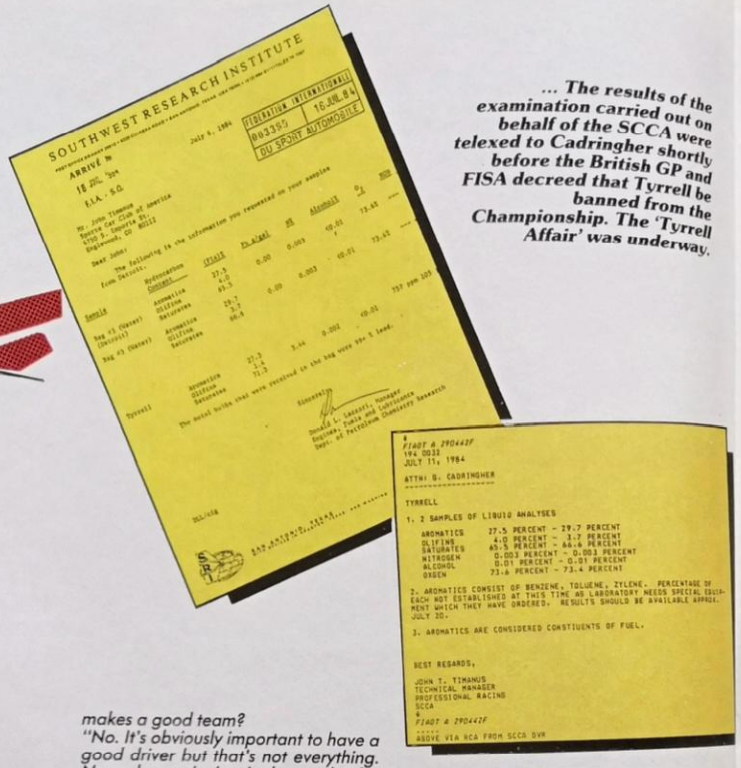
— Senna?

"He's still a bit young and impetuous. If I had enough money, I would take on Rosberg for qualifying."

— Do you think that a good driver



Brundle was second in the 1984 Detroit GP but FISA had been suspicious that something was not quite right with the Tyrrell 012 for a while. At the end of the race, samples of the contents of two small reservoirs, officially for water, were taken....



SOUTHWEST RESEARCH INSTITUTE

ARRIVÉ le 16 JUIL 1984 F.I.A. - S.O.

FEDERATION INTERNATIONALE 16.JUIL.84 DU SPORT AUTOMOBILE

July 6, 1984

Mr. John Timanus
Racing Car Club of America
1250 I. Street NW
Washington, DC 20122

Dear John:

The following is the information you requested on your samples from Detroit:

Sample	Hydrocarbon Content	ppm/C	Aromatics	MS	Aromatics	%	mm
	Aromatics	27.5	0.00	0.003	<0.01	73.65	
	Olefins	4.0					
	Saturates	65.5					
Bag #3 (Tyrrell)	Aromatics	29.7	0.00	0.003	<0.01	73.65	
(Revised)	Olefins	3.7					
Bag #2 (Tyrrell)	Saturates	66.6					737 mm Hg
	Aromatics	27.5	3.44	0.002	<0.01		
	Olefins	4.0					
	Saturates	73.5					

The metal holes that were received in the bag were the 1 level.

Sincerely,

Donald L. Ledbetter, Manager
Engines, Fuels and Lubricants
Dept. of Petroleum Chemistry Research

SRI/1456

FIAOT A 290442F
194 0033
JULY 11, 1984

ATTN: B. CADRINGHER

TYRRELL

1. 2 SAMPLES OF LIQUID ANALYSES

AROMATICS	27.5 PERCENT - 29.7 PERCENT
OLIFINS	4.0 PERCENT - 3.7 PERCENT
SATURATES	65.5 PERCENT - 66.6 PERCENT
NITROGEN	0.003 PERCENT - 0.003 PERCENT
ALCOHOL	0.01 PERCENT - 0.01 PERCENT
OXGEN	73.6 PERCENT - 73.4 PERCENT

2. AROMATICS CONSIST OF BENZENE, TOLUENE, ZYLENE. PERCENTAGE OF EACH NOT ESTABLISHED AT THIS TIME AS LABORATORY NEEDS SPECIAL EQUIPMENT WHICH THEY HAVE ORDERED. RESULTS SHOULD BE AVAILABLE APPROX. JULY 20.

3. AROMATICS ARE CONSIDERED CONSTITUENTS OF FUEL.

BEST REGARDS,

JOHN T. TIMANUS
TECHNICAL MANAGER
PROFESSIONAL RACING
SCCA

FIAOT A 290442F

ABOVE VIA RCA FROM SCCA DVR

... The results of the examination carried out on behalf of the SCCA were telexed to Cadringher shortly before the British GP and FISA decreed that Tyrrell be banned from the Championship. The 'Tyrrell Affair' was underway.

"THE JAPANESE AT LAST SEEM TO HAVE UNDERSTOOD HOW TO EXPLOIT CERAMICS"

makes a good team?

"No. It's obviously important to have a good driver but that's not everything. Nowadays, winning is the result of a team effort not the talents of just one man, however gifted he may be."

— What makes you plump for the Honda engine?

"The way the Honda engine has come to the fore has been quite astonishing. It is very, very powerful and not too thirsty thanks to the use of electronics and new materials. The Japanese at last seem to have understood how to exploit ceramics which remain a mystery to many others."

— Who would design your F1 car?

"Certainly Gordon Murray, if only for his creative flair but Ducarouge, Head or Barnard would do me nicely. They are people you could depend on to be sure of getting results in the shortest possible time."

— Some engineers are simply happy just to copy the ideas of others. That doesn't sound like a bad move.

"As long as they understand what they are copying. Remember Concordski..."

— Getting back to reality, one gets the impression that engine technology is progressing by leaps and bounds whilst chassis design is stagnating. Why do you think that is?

"I don't really know. I firmly believe that there remains much that can be improved on today's chassis especially concerning the aerodynamics. Carbon fibre could be used for other elements than the shell and brake discs. But you're right, it is engine technology that is evolving the fastest. We've got to a point now where we can get 600 bhp per litre with fuel consumption not a great deal higher than in the days of the normally aspirated Cosworth. It really is quite extraordinary."

— Do you not think that it's a dangerous state of affairs where people are talking about double turbos and power output in the region of 1,000 bhp per litre!

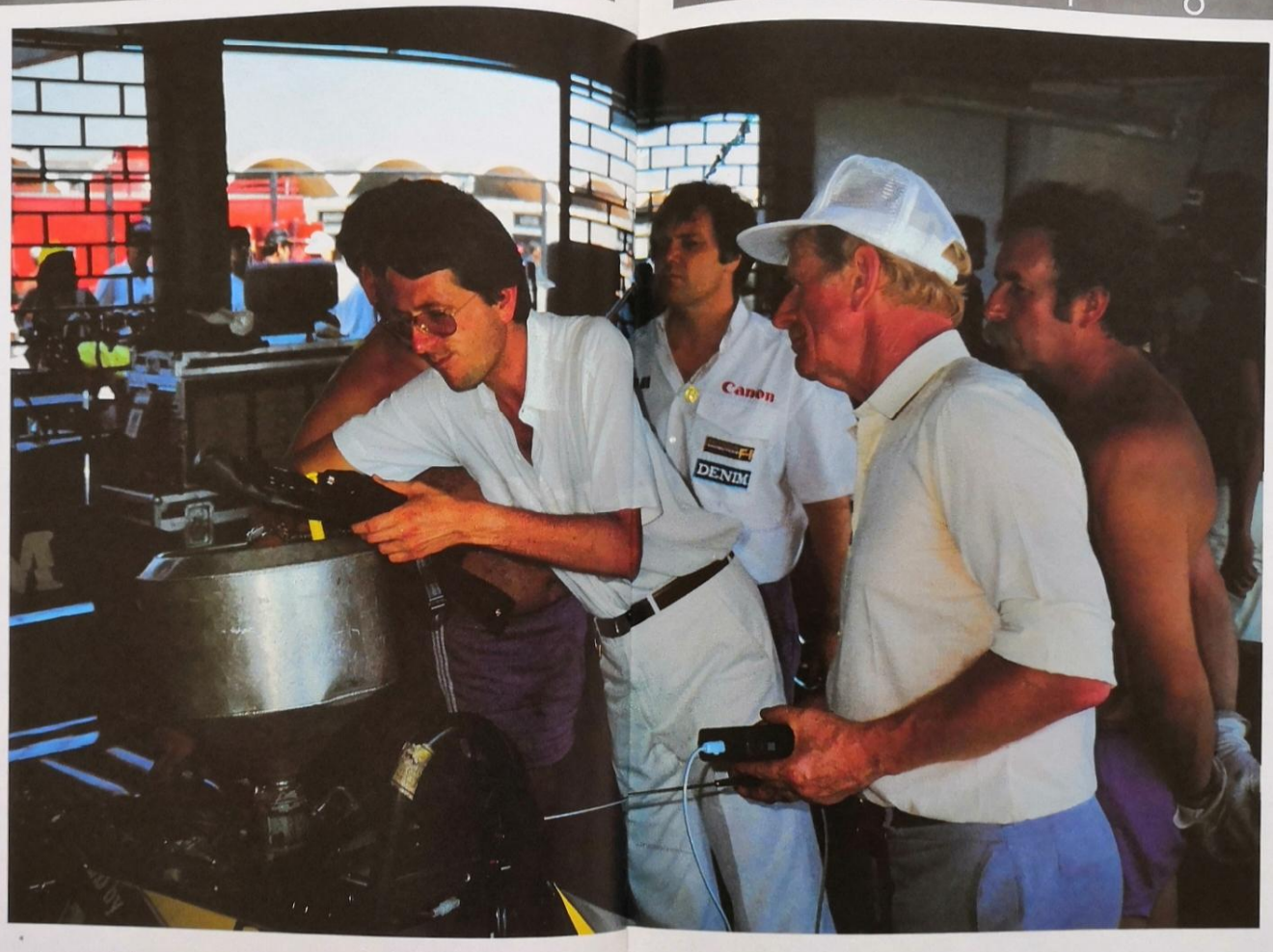
"It's true that a lot of work is being devoted to the development of double turbos, incidentally another technique already used in aviation. I think that most people believe that the gain in power is not worth the weight increase that goes hand in hand with the system; the engine block would have to be bigger, it would be necessary to fit more, and bigger, radiators and intercoolers, pipes would have to be longer... I wonder if it's worth it. It's the sort of thing you can only check out on the circuit not in the drawing office. I must say that I am disappointed that all today's engines are turbos. It's a shame that the non-turbos no longer have a place in F1."

— But wasn't it FISA's regualtions that spelt the end of the 3 litre non-turbo?

"Yes. But everybody was in agreement that the use of turbos be favoured rather than normally aspirated engines

Cadringher made a name for himself when he disqualified the works Audi Quattros during the 1981 Acropolis. The German team had taken out two headlights in an effort to improve engine cooling in the Greek heat.

"FISA MUST ENSURE THAT ITS AUTHORITY AND COMPETENCE ARE RESPECTED"



Imposing fuel restrictions in an attempt to halt escalating power output in F1 was one of the FISA engineer's major tasks over recent years.

on the grounds that everybody would be forced to adopt them sooner or later. It is difficult to see how the Cosworth could have survived despite the progress it has made. It is also easier to design a 1,500 cc turbo-charged engine than a normally aspirated 3 litre and you should realise that the capacity of a turbo is, in a way, variable since you only have to adjust boost to increase or lower power output. But Formula 1 is a case apart. We have tried to make things more equal in Group A, B and C. In F1, we were forced to make a choice so that engineers could quietly and confidently get on with their work in the knowledge that the regulations weren't going to change for some years. We also wanted to encourage newcomers so it was vital that we fix long-term rules in order to make the huge development investments worthwhile."

— Is that why you have dropped the project to bring capacity down from 1,500 cc to 1,200 cc?

"Exactly. It would have cost far too much money."

— It was a decision that didn't seem to suit Ferrari...

"I know but they finally fell in line. Perhaps they ran into technical problems with their 1,200 cc engine."

— It is nevertheless certain that the advent of the turbo had a radical effect on the shape of F1. How do you see the future?

"It's impossible to say. We could fix a limit of 1,000 bhp per litre but where would that leave us? It would mean that cars would have to deal with 1,500 bhp and I don't see how any of today's cars could do that. It is worth noting that, in the past, the cars that have dominated the scene have not always been the most powerful. It is more essential to have a well balanced car."

— Is FISA conscious of the fact that it has been ridiculed by the introduction of fuel consumption limits? Do you not think that it goes against the very definition of Formula 1?

"What else can you limit if you want to curb power? Fuel feed? We thought of that but it is a very difficult thing to impose. The teams don't want to know about it because it would mean using a part supplied by FISA. They want to be 100% responsible for their cars and would not want to lose a World title because of a component that they had no control over. Anyway, we have been waiting for the flow-meter from Cosworth for two years now?"

— Since you have dropped the plan to limit engine capacity, what other possibilities are there?

"Research undertaken by Moteur Moderne has led to some interesting ideas, especially the idea of limiting air supply to the turbos which has worked well in F3. We are looking at that very closely and it is very likely that we will introduce it for the new Group S cars in Rallying before adopting it for F1."

— When do you think that will be?

"In compliance with the procedures laid down by the Concord Agreement."

— How have the teams reacted to the idea?

"As soon as you want to change anything they're automatically against but the unhappy thing now is that it's not the teams themselves that are concerned but the engine manufacturers. They are more worried about the commercial and industrial aspect of their activities rather than the sporting side. Nowadays it's not Williams that speaks out but Honda."

— The governing body seems to be proud of the arrival of all these industrial giants but isn't it they who are respon-

WHO IS GABRIELE CADRINGHER

Cadringher was born in Varese, near Milan in the North of Italy, in 1950 and comes from a family with a strong aviation background. His uncle took part in the Schneider Cup in 1929 at the controls of a hyrdoplane, crossed the Atlantic with Italo Balbo and spent the last war in the cockpit of a torpedo-plane. Grandfather had been in the airforce and father too was a pilot, so it was only natural that young Gabriele should look towards the sky when the time came to choose a career. *"I wanted to fly planes but I am short-sighted so I opted for a career in aeronautical engineering."* In addition to their love of flying, his parents were both car enthusiasts with a particular interest in motorsport. As a little boy, the future FISA engineer was regularly taken along to watch Italy's major sporting events; the Targo Florio, the Syracuse Grand Prix, the Mille Miglia, etc.

Cadringher studied engineering at Turin Polytechnical College before spending his military service with the Italian airforce conducting a survey into the reasons behind a spate of serious accidents involving the American Starfighter planes. *"Afterwards I started working with Aeritalia where I stayed five years and worked on projects like the Tornado, a military plane designed in conjunction with Messerschmitt and British Aerospace for NATO."* At the same time, his passion for motorsport had grown. He had become scrutineer with the Italian governing body and, as such, was sent out to the Acropolis Rally in Greece in 1981. He made a name for himself when he disqualified the mighty Audi Quattros for illegal headlights. Jean-Marie Balestre was curious to meet the person who had dared do such a thing and offered him a job with FISA in the weeks that followed.

For the record, Cadringher is not Italian but Hungarian.

"THE TEAMS WANT TO BE 100% RESPONSIBLE FOR THE COMPONENTS USED ON THEIR CARS"

sible for the escalating costs involved in F1?

"I don't think so. They have brought with them a new technological approach, more money and lots of publicity."

— But don't the disadvantages of their presence outweigh the advantages. By how much have budgets increased since Renault first became involved?

"Any sport in which the competition is intense costs a lot of money but it is true that the arrival on the scene of major automobile manufacturers has had an adverse effect, financially as well as on the sport's basic philosophy. Companies like Renault, Honda and BMW became involved simply to promote their products. They were prepared to put in vast amounts of money to win but there is always the danger that they pull out without warning, as Renault did. Unlike a small team, a major manufacturer does not need F1 to survive and it only needs an accountant to say enough is enough and they can turn round and pack their bags. In Honda's case, the consequences would not be too dramatic. If Renault decided to drop their engine development activities, however, six cars would be instantly engine-less."

— So you think there is a danger in their presence?

"What can you do about it? Ban turbo-engines? It's too late. They created a lot of problems at first but I think that we now have that aspect in hand, even if it is just a case of preserving the precarious balance which Formula 1 is in at the moment. I only mention technical restrictions because, unfortunately, it is impossible to control financial input. Can you imagine asking a constructor intent on winning the championship to limit his budget to X million dollars? When Ford, and then Renault decided to put everything into winning Le Mans it worked for them. Renault tried to repeat the feat in Formula 1. They were less fortunate but it gave others the idea to try themselves. Since it is impossible to limit abstract elements like budgets, we are obliged to concentrate on things like petrol, tyre widths, wing surface areas, flat bottoms, etc."

— You sound a little pessimistic.

"Yes and no. Formula 1 costs more and more money, teams come and go, suffocated by the system that they themselves are responsible for. There is a further danger. What is going to happen the day that TV companies refuse to transmit pictures which include cigarette advertising? If Marlboro announced that they were pulling out, F1 would collapse in days. Thankfully F3000 seems to be working well. Last year's champion, Capelli, tells me that he did last season on a limited budget and only rebuilt his engine once. Formula 3000 could, eventually, take the place of F1."

— How would you define the ideal regulations?

"They don't exist. Regulations evolve as a result of a number of influences; technical progress, public opinion, the solutions adopted by engineers, etc. Perhaps the best compromise at the moment is Endurance Racing."

— Endurance seems to be the black sheep of the FISA family.

"It is a form of motorsport which has lost much of its former favour with the public. People often talk of the hey-day of Endurance Racing, or more precisely, of the Le Mans 24 Hours. But if you look back at what is commonly considered as being the golden era of Le Mans, the races were often nothing more than a fight between just two manufacturers. Ford v Ferrari, Ferrari v Porsche, Porsche v Matra, etc. At the time there were only eight GPs a season and those that were after a bit of publicity chose Le Mans where all the top drivers took part and not F1. Slowly but surely, the situation has changed to a point where Endurance has nearly been squeezed out. Formula One now has most of the top drivers, has enjoyed much more active technical research, has attracted more press and publicity for itself and, as a result, nearly monopolises budgets. With no stars like Senna, Prost or Rosberg to boast of, Endurance has got to rebuild its reputation by producing a new generation of drivers and cars. It won't be easy and it won't be overnight but they're off to a good start."

— Here again, though, the fuel consumption limits have had an adverse effect on the sport.

"Not at all. It's just that neither the press nor the public really understand the regulations. The teams haven't exploited them correctly either... except for Porsche."

— Thanks to the money they've got...

"No doubt."

— Another thing which FISA appear to be slow in acting upon is security in Endurance racing. Why is it that drivers can kill themselves in Endurance but not in F1?

"That's not true. The serious accidents which occurred in Endurance in 1985 can only be put down to fate."

— Really? Hadn't the Mosport circuit, where Winkelhock lost his life, been banned by FISA's Security Committee?

"Yes. The race took place because all the constructors wanted to have one race in North America."

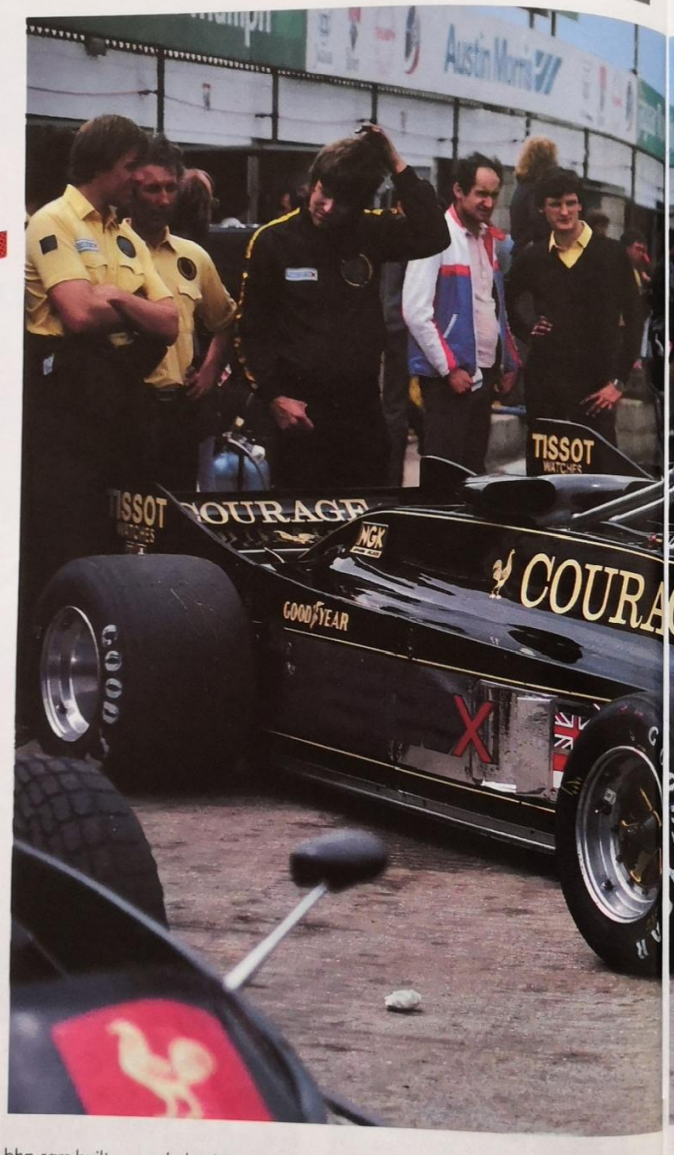
— So who's responsible then?

"It's not my place to say."

— It's also a bit frightening to see 1,000

Colin Chapman's Lotus 88 was refused by scrutineers for the first time at the Long Beach GP in 1981 because of its double shell...

"CAN YOU IMAGINE ASKING A CONSTRUCTOR INTENT ON WINNING THE CHAMPIONSHIP TO LIMIT HIS BUDGET TO X MILLION DOLLARS"



bhp cars built around aluminium bathtubs!

"A Group C car is as powerful as a Formula 1 car, just as quick and a few kilos heavier. Consequently they must absorb more energy in the event of a shunt. The problem is unfortunately difficult to solve. It would be impossible for some small teams, who only produce one version of their car, to submit the result of their labours to a crash test! We have got to get round the problem by other means. A solution which we are working on at the moment is to collaborate closely with the major manufacturers like Porsche and Lancia in an effort to define parameters which will eventually be imposed on the smaller teams."

— Once again, the notion of money is involved.

"Of course. As soon as F1 crash tests proved that carbon fibre was the safest construction material around, everybody adopted it. Even Osella. The smaller Endurance teams could never afford that. As a result, Porsche, who are out to sell their cars at the most competitive price, design the simplest car possible, in aluminium."

— One final question: What aspect of motorsport does Gabriele Cadringher prefer?

"Rallies! Purely because a rally driver has to be an all-rounder, capable of driving flat out for 48 hours in the rain, on the dry, in the snow, on ice, by night or by day, sometimes even on open roads. It is the most complete form of motorsport. He has to be able to improvise, and have a certain artistic flair that a circuit driver doesn't necessarily need. It needs something extra special to drive a rally car on something like the Monte Carlo, a fantastic, unforgettable sight. I know that a Grand Prix driver has to be much more precise, the driving effort is more intense, but it is only for short periods at a time. In F1, however, you do need to have to have a real ability to concentrate." ■

... A modified version, baptised 88B, was entered for the British GP at Silverstone six months later but was again refused the start. For Cadringher, it was a shame that the rules didn't allow the revolutionary Lotus.

WALDEGAARD OUT OF AFRICA

HE HAD COME TO WIN, AND HE DID JUST THAT. HE HAD THE INTENTION OF TAKING CONTROL OF THE RALLY FROM THE OUTSET, AND THAT'S EXACTLY WHAT HAPPENED. THANKS TO HIS WIDE EXPERIENCE OF AFRICAN EVENTS, BJORN WALDEGAARD GAVE THE TOYOTA CELICA ITS THIRD VICTORY IN THREE YEARS ON THE SAFARI, A JAPANESE SUCCESS STORY ROUNDED OFF BY THE SECOND AND FOURTH PLACES OF TORPH AND WEBER.

by Michel Lizin

THREE IN A ROW

For the third time running, a Toyota Celica Twin Cam Turbo has won the Safari Rally. And it would so nearly have been a one-two-three for the Japanese manufacturer had Weber not succumbed to rear axle problems at the very end of the event, allowing Markku Alen and the Lancia 037 through into third place. With two wins on the Ivory Coast and three in Kenya to its credit, the Toyota Celica has yet to be beaten in Africa.

And once again Toyota Team Europe called upon the services of up and coming youngsters to complete a team which includes one of the world's most experienced drivers in its ranks, Bjorn Waldegaard. *"Torph's drive here this year was as capable as Kankkunen's twelve months ago except that this year I won,"* announced Waldegaard after winning the African classic for the third time, equaling Joginder Singh's record. Only Mehta, with five wins, has done better. Having witnessed the Swedish driver's morale at the Nairobi finish, Mehta's record definitely appears to be in danger.

Waldegaard started the event as favourite and looked set on pulling out a substantial lead from the outset, a tactic which relied heavily on the now legendary reliability of the Celica. It was a plan which worked out perfectly, although Bjorn can count himself lucky that, when he lost a wheel complete with wheel shaft during the final leg, the Toyota service crew was only a kilometre away and repairs were carried out with a minimum loss of time. But then, don't you need a bit of luck to be able to win an African rally?

For Fred Gallagher, Waldegaard's co-driver, it was his second Safari win in two years after navigating Kankkunen to victory in 1985. *"It was a different rally this year,"* pointed out Fred. *"With Juha, the plan was to play a waiting game while the others fought it out between them. The pace was a lot faster this year with Bjorn."*

The three Toyotas were not entirely spared their share of problems, it's just that they encountered less than their rivals. Main causes for concern for the Celicas were rear axles (for Waldegaard and Weber), hubs (for Waldegaard and Torph) and brake calipers (for Torph and Weber). *"I don't understand,"* claimed Peugeot engineer, André de Cortanze, during the rally. *"OK, the Toyotas might be stronger than the rest but even when our Peugeots aren't slowed by problems, the Toyotas are as fast, if not faster, than the 205 Turbo 16s."* The performance of the 205 was both encouraging and disappointing in Kenya. The result itself will certainly be a blow to the French teams plans, the highest placed car of Kankkunen finishing no better than fifth, allowing Lancia to take a clear lead in the World Rally Championship for makes, but at least both cars were at the finish and the problems encountered were less due to the basic design of the car than in 1985. Kankkunen lost third place when a lead came away from a relay whereas Mehta's principal source of trouble throughout the event was the engine. *"Toyota manage to get their turbo to work in Africa,"* commented the Kenyan after the rally, *"there's no reason why we shouldn't."*

One of the main problems with the Safari is that manufacturers whose goal it is to win the World Championship are less able to prepare for the specific requirements of the Safari than Toyota do. *"But at least when the other four wheel drive cars come to the Safari for the first time, and that shouldn't be long now, Peugeot will have the advantage of two years' experience over them,"* pointed out Kankkunen. He's not wrong but it mustn't be forgotten that Toyota won on their first ever attempt and the Ford team won't exactly be beginners on the Safari.

Lancia's Safari very nearly turned out to be a disaster but Alen's perseverance allowed the last remaining Rally 037 to snatch third place and a welcome advantage over their French rivals in the World Championship. After three attempts at the Safari, the Lancia 037 has yet to distinguish itself, doing no better than its predecessors, the Fulvia HF, the Stratos or even the Fiat 131 Abarth. The Italian make has yet to win there.

Preston and Biasion retired during the second leg and Alen dropped way down the leader board after going off while driving by torchlight. Things didn't look at all healthy for Lancia at the half-way stage. However, Alen was to be spared any mechanical problems from thereon and managed to force his way up to third place. Had it not been for the broken alternator on the first leg, the Finn would no doubt have given Waldegaard a closer run for his money.

The Subaru RX Turbos took first and second places in Group A, not really a surprise because the Japanese car has always shown well in Kenya over recent years. It is interesting to note that Kirkland and Tundo finished very close to Kankkunen and in front of Mehta, proof that a regular drive pays dividends on African rallies.

The performance of the two Golf GTis is worth a mention, both cars doing a lot better than expected. Franz Wittmann made it to the finish despite having been delayed by a number of problems whilst Kenneth Eriksson was always in close contact with the Subarus and even managed to tail the Group A lead before retiring after an unfortunate incident. Whilst negotiating a fast bend, a steering arm broke loose and the Swedish driver could not stop the Golf going off into the spectators, instantly killing one of them.

Rallying is going through a decidedly dark period.

The Toyota Celica Twin Cam Turbo has yet to be beaten on African soil since its first appearance on the Safari in 1984

The holding control of the Jacaranda Hotel, only a few kilometres away from the Kenyan capital, gave the sixteen remaining crews of the 34th Safari Rally a last chance for a well earned breather before the official finish in Nairobi. Bjorn Waldegaard calmly parked up his Toyota Celica Twin Cam Turbo which had been lovingly washed by his team's mechanics. The expression on the Swedish driver's face betrayed little of what must have been going through his mind. But that's Bjorn. You would never have guessed that he had just completed over 4,000 km of African dirt-tracks nor that he had just won the Safari Rally for the third time in his career. *"A few moments ago, Bjorn pulled up in front of the bar and went in to order a beer. It's his way of celebrating,"* explained Fred Gallagher, Waldegaard's new co-driver and winner of the event twelve months previously alongside Juha Kankkunen.

Waldegaard himself was eager to underline the exploits of his two team-mates, especially young Lars Erik Torph, his latest protégé, although he admitted that he was nevertheless glad that Torph finished behind him. Switching the subject to his relationship with his new Irish navigator, the Swede appeared pleased with his latest partner. *"The working relationship between myself and Fred is perfect,"* he confided, *"and there were a number of occasions in the car where we both had a good laugh together. It was the same thing with Hans Thorszelius before but when a driver changes navigators it is always a difficult moment and I am really glad that everything worked out as well as it did."*

IN THE LOUNGE OF THE SERENA HOTEL

The Toyota team always likes to feel at home and, as in previous years, they had chosen the Serena Hotel, a short distance from the centre of Nairobi, as their base for the Safari. The rhythm of the Safari is very different to that of other World Championship rounds, its long recce punctuated by equally long breaks for rest. *"Yesterday we put in 1,450 km without stopping from six in the morning until ten at night,"* Fred informed us on the evening of the Monday before the start. For the eventual winners, practice involved passing everywhere twice, similarly to most of the other leading drivers except Kankkunen who had only been over the route once. *"Once everywhere was enough to win last year,"* explained the Peugeot driver. *"I don't see why I should change my approach."*

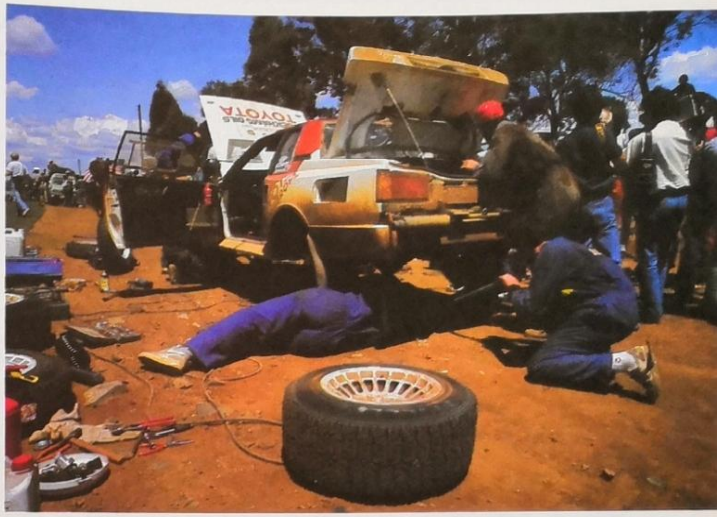
Needless to say, Kankkunen still has very close contacts with the Toyota team and he often called in to see his former 'colleagues' during the days before the start, a time for most leading crews to get in a bit of rest and to relax. *"The Turbo 16 is going well at the moment. You're in for a surprise,"* announced the young Finn to his Toyota friends. Waldegaard however didn't seem convinced. *"If you had the choice between the 205 and the Celica for the Safari, which would you choose?"*

Kankkunen seemed unwilling to answer before finally declaring, *"The Celica, basically because I know it to be a strong car. The Peugeot will be one day too. For this year we'll have to wait and see, but when the other 'Super Group B' cars eventually come to compete in Kenya, a 4WD is bound to win and Peugeot will have two years more experience than its rivals."*

"I can't really understand why Audi haven't come this year," added Waldegaard. *"After all, the top speed of the Quattro is quite impressive, the car is stable at high speed and the shell is incredibly strong. They should have spent three months or so preparing the Safari instead of doing Monte or Portugal."*

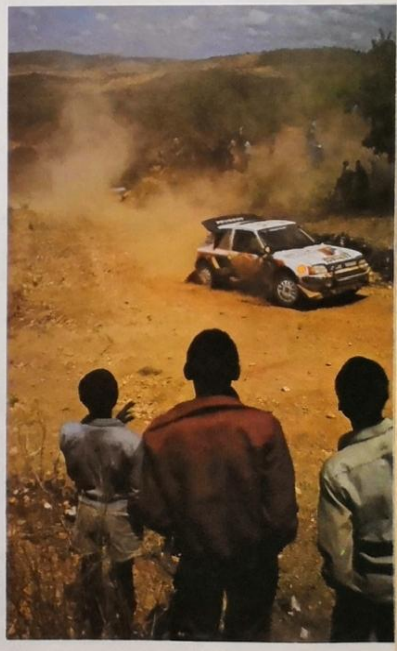
Whilst the drivers talked together, Henry Liddon, former co-driver and now team co-ordinator, appeared a little anxious. *"Our Pirelli tyres are giving us cause for concern and the shock absorbers we have put aside for the rally have turned out to be as fragile as glass. They didn't give us any trouble during testing."* The faulty parts were promptly sent back to Europe and new shockers and tyres were airfreighted across in time for the start.

"I don't like Africa," continued Liddon, *"but I do love the challenge that this sort of event presents. Unforeseen problems are waiting for you around every corner, each one requiring a specific solution. I get a kick out of trying to find those solutions but this time there really are too many. I'm on the point of cracking up!"* Once the rally had got under way, though, Liddon's fears evaporated. From the Toyota plane, he never stopped moving his pawns about the Kenyan chess-board, keeping a watchful eye on everybody and leaving the crews with the sole task of staying on the track.



The three works Toyotas enjoyed a relatively trouble-free run. The only alert for Waldegaard was rear axle failure during the third and final leg

A sixth Safari victory was never really on the cards for Mehta in the second Turbo 16



Now that the Toyotas have become unbeatable in Africa, most observers at the finish were trying to pin point the reasons behind the Japanese car's success. The most commonly heard argument was the Celica's top speed of 230 kph. In order not to be left standing, Peugeot had developed a 6-speed gearbox capable of giving a top speed of 245 kph for the 205. *"245 kph on tarmac, not on the loose,"* pointed out Kankkunen. *"The Turbo 16 isn't stable enough to withstand that sort of speed over gravel roads."*

Once again, Waldegaard had something to add. *"If you've got a car that's capable of cruising at 200 kph in total safety over fast sections, you can count yourself lucky."* The Swede's opinion seems to be shared by Lancia because the 037's top speed was given as 210 kph, the same as in 1985. As it turned out, the French car was only to use the 5-speed gearbox but the new box should shortly be introduced for European style events and possibly the Tour of Corsica.

AT THE KILIMANJARO BUFFALO LODGE

The first rest halt of the rally was scheduled after about a third of the first leg, after the crossing of the famous Chyulus Hills. The surface of the twisty, narrow track is initially composed of volcanic lava before becoming little more than a grass covered bridle path.

"You get the impression you've been driving for hours, but then you realise you've only covered 35 km and you've got twice that distance left to do," was how Lars Erik Torph described the experience. Nevertheless, the youngest of the Toyota boys was satisfied with his performance over that section, as were most of the leading crews excepting the Lancias. Grass kept building up against their radiators, causing the Italian cars to overheat and obliging the drivers to get out and clear away the offending undergrowth. At the Kilimanjaro Buffalo Halt, Vic Preston Jr. was the most explicit. *"For me, the rally starts here. There was no need to include the Chyulus Hills in the Safari, the rest of the rally suffices in itself. The Safari has existed for over thirty years and has managed very nicely without them. They completely destroy the true character of the event."*

Markku Alen had an even sorrier tale to tell. He had punctured and was passed in the overall positions by the VW Golf of Group A leader, Kenneth Eriksson. The first leg included another difficult section, a 120 km haul through the Taita Hills at night. True to tradition, rain and fog awaited crews and the rivers of the region were flooded, Franz Wittmann's Golf getting stuck in one for over an hour. Waldegaard continued his domination of the event over the section but Markku Alen found himself in the most unenviable of situations.

"The battery began to progressively die away. The first thing I did was to switch off the auxiliary lights, but my windscreen wipers and ordinary lights finally stopped working completely. Kiki, my co-driver, passed me a torch which I held out of the window to light up as much of the road as possible whilst Kiki tried his best to read out the notes to guide me. At one point, Greg Criticos overtook me with his Lancia Rally and I tried to follow his tail-lights. It was no good though, he was going too fast for me and I lost him. In the pitch darkness of the night, I couldn't risk going faster than 10 or 20 kph, although even that was possibly too fast. In the end, I left the road on one bend and the car ended up on the driver's side in a ditch. Since I had been driving with my left arm out of the window, I was trapped by the weight of the car. Alone, Kiki couldn't free me but, happily, Criticos's service crew showed up ten minutes later and got the car out of the hole. And to think that my own service crew was less than 2 km away!"

LESSONS TO BE LEARNED

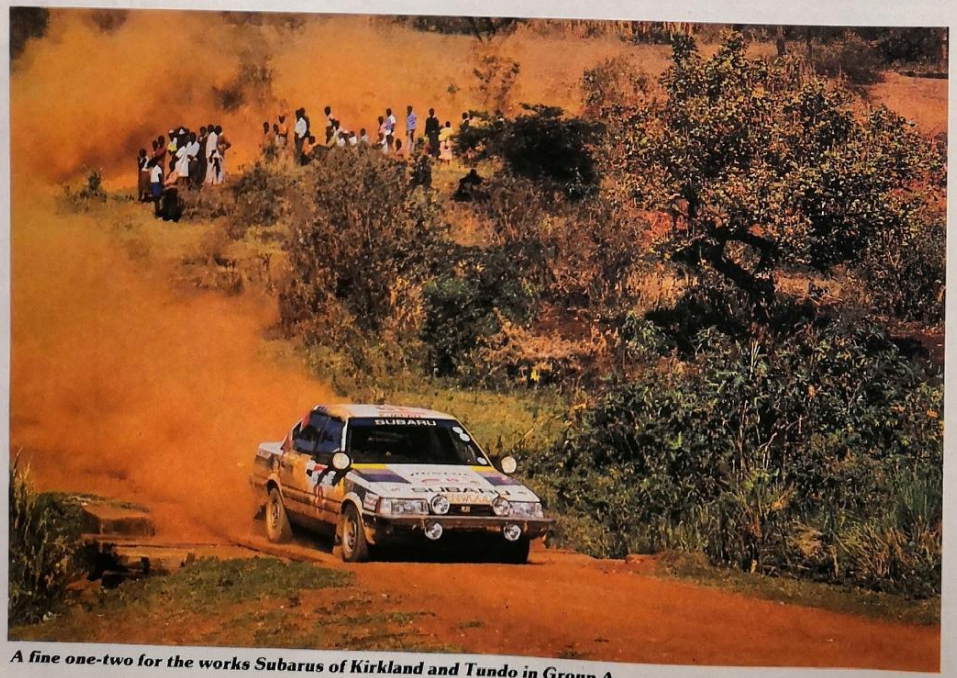
Shortly before the end of the first leg, Weber's Toyota collided with the rear of Mehta's Peugeot, sending the 205 off the track. Weber was able to continue, snatching 4th place from the Kenyan driver! *"I had been on the Peugeot's tail for quite a while,"* explained the German driver, *"waiting for a chance to overtake. At the end of a fairly fast portion, Mehta braked much earlier than I had anticipated for a tight bend. To make matters worse, his stop-lights were not working. By the time I realised he was actually braking, it was too late, I couldn't help but run into him. It was an accident."*

Mehta's version was slightly different. *"Old Weber was going a bit too quickly. Of course he did it on purpose but you can't blame him. I would have done the same thing if I had been in his position. A little more gently perhaps..."*

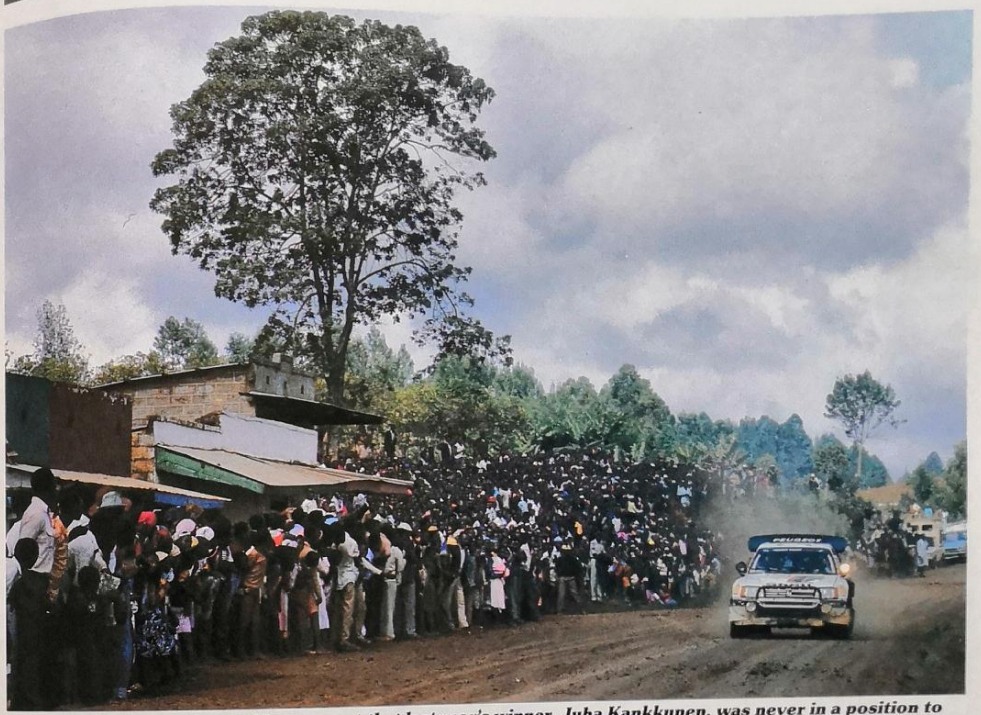
At the end of the rally, Erwin Weber's Celica showed signs of heavy damage which apparently occured when he ran into the boot of Saimbi's Opel Manta 400 during an overtaking manoeuvre. Perhaps somebody ought to whisper into the young German's ear that when you want to get past a competitor, it is more common practice to pull over to one side than to try and go over the top!

At one point, Mehta had difficulty getting his Turbo 16 started and the Kenyan was heard to say, *"Erwin, would you mind coming and pushing me?"*

New Zealander, 'Possum' Bourne, was competing in his first event outside of his home country and put up a splendid show. Over the Taita Hills he was even



A fine one-two for the works Subarus of Kirkland and Tundo in Group A.



A combination of small problems meant that last year's winner, Juha Kankkunen, was never in a position to challenge the leaders

TEAM BY TEAM

There were 69 crews at the start of the 1986 Safari. Winners of the two previous editions, TOYOTA had taken along three Celica Twin Cam Turbos for the experienced Bjorn Waldegaard, co-driven by Irishman Fred Gallagher, and two up and coming drivers, Lars Erik Torph and Erwin Weber. The young Swede's co-driver was Bo Thorszelius, Waldegaard's former partner's twin brother, and the German was navigated by Gunter Wanger. The cars, officially entered by Toyota Team Europe, weighed in at 1,300 kg for a power of 360 bhp and a top speed of 230 kph. Apart from slight modifications to the suspension settings, very little had changed on the Celica compared with the cars of the last two years.

There were two PEUGEOT 205 Turbo 16 E2s in Africa for Juha Kankkunen/Juha Piironen and for local driver Shekhar Mehta, winner of five previous Safaris and navigated by Rob Combes this year. The weight of the 205s was given as 1,100 kg for 400 bhp. The French team were unable to use their 6-speed gearbox because of homologation problems so top speed was restricted to 225 kph instead of 245 kph although they were able to try out a new water cooling system for the shock absorbers.

LANCIA were the other major manufacturer present but they preferred to leave the 4WD Delta S4 in Italy on the grounds that the reliability of the Rally 037 would pay dividends in the Safari context despite its only having 2 driven wheels. There were three official cars for Markku Alen/Illka Kivimaki, Massimo Biasion/Tiziano Siviero and Vic Preston Jr./John Lyall. The wheel stud problems that had plagued the Italian cars in 1985 had been resolved and the electrics had been revised. Cesare Fiorio, Lancia team-manager, had taken the precaution of including local crews, Greg Criticos/Marzio Kravos and John Hellier/David Williamson, in his list of official Lancia drivers so that they would be able to score points in the World Constructors' Championship should the worse come to the worse for the works cars. Criticos and Hellier were also assured of a higher place in the starting order which meant that they could help out the official cars in case of difficulty.

VOLKSWAGEN had made the trip to the African continent for the first time on an official basis and there were two Golf GTis for Kenneth Eriksson/Peter Diekmann and Franz Wittmann/Matthias Feltz. The German team were unable to get in any private testing prior to the event. Their principal rivals in Group A were likely to be the three SUBARU RX Turbo 4WD which were entered for the first time by the factory as opposed to a dealer team. The Subarus were given at 1,000 kg and 180 bhp and were crewed by the two local pairings of Mike Kirkland/Robin Nixon and Frank Tundo/Quentin Thomson as well as New Zealanders Possum Bourne/Mike Fletcher.

The more notable private entries came from Jayant Shah/Lofty Drews, Iwashita/Nakahara, Iwase/Vinayak (all Nissan 240RS) and Basil Criticos/Thatthi (Opel Manta).Rudolf Stohl/Reinhardt Kaufmann were present in a works entered, HB sponsored Audi 80 Quattro but there was no official Audi service crew in Kenya.

The first leg of the Safari included two particularly difficult sections, a narrow, grass covered track across the Chyulu Hills and the long trek through the Taita Hills where the likelihood of rain is generally high. Length of the first leg was 1,287 km.

"I'll drop ten minutes in the Chyulu Hills," predicted Bjorn Waldegaard before the start, a forecast which turned out to be perfectly correct. The Swedish driver was the only competitor to lose so little time and was consequently first leader of the event, 1 minute ahead of Kankkunen, 3m in front of Mehta who was slowed by overheating problems, 4m ahead of Torph, 5m ahead of Weber, 6m ahead of Preston and Biasion and 9m in front of Alen. The three Lancia crews all lost time when they had to stop to clear away grass which had got stuck in the radiator and, on top of that, Alen punctured.

Waldegaard's task of keeping the lead was made easy for him when Kankkunen took the wrong turning at a junction, losing 3 minutes to the Toyota driver. Torph was less fortunate when he lost 7 minutes for the same reason. Once again, the Lancias all lost time. Preston was having difficulties with his shock absorbers and oil pump, Biasion's alternator and intercom started to play up in the Taita Hills whereas poor Alen really suffered when his alternator failed during the night whilst the expected rain was at its heaviest. Without lights or windscreen wipers, the unlucky Finn continued by the light of a torch which he held out of the window but, just 2 km from where his service crew was waiting, he left the road and lost over an hour to the leaders on that one section.

Waldegaard and Kankkunen dominated the proceedings throughout the first leg. The Swede returned to Nairobi with 38 minutes road penalties, 4m less than the Peugeot driver. Biasion had managed to live with his problems and rallied the Kenyan capital in 3rd position, 15m behind the leader. Towards the end of the leg, Weber ran into the back of Mehta's Peugeot. The Kenyan lost 6 minutes in repairs... which allowed Weber through into 4th place, 3m ahead of Mehta but already 20m adrift of Waldegaard. Torph was 6th and preceded the leading Gp. A Subaru of Kirkland. The battle for supremacy in the group was being hotly fought out between Kirkland, Bourne and Eriksson although the latter was delayed by a fairly long service intervention just before Nairobi. Preston had run out of petrol and had experienced injection problems which dropped him to 59 minutes behind Waldegaard whilst Alen was 14th, 1h 23m behind the leader.

The second leg, 1215 km long, took place around Mount Kenya and very quickly turned to Toyota's favour when only the Japanese cars were spared major mechanical trouble. Kankkunen was the first to drop time after a front shock absorber broke and he was further delayed by ignition problems before ripping off the Turbo 16's rear suspension which led to transmission failure. Mehta's Peugeot was not fairing any better, he too suffering from ignition difficulties after losing 10 minutes when the motor refused to start after a puncture. Just before their return to Nairobi for the second time, the two 205s dropped another half-hour or so when the French team decided to change both cars' clutches, weakened by the dusty conditions.

Lancia's situation was even worse. Biasion had had to stop to change the alternator belt which also drives the water pump. Repairs took a long time and the Italian driver hadn't got very far before the same problem reoccurred. The Lancia service crew was so far away that Biasion, aware that he had already dropped a lot of time, decided to continue at low speed but, as could have been expected, the engine overheated, the gasket blew and the 037 stopped for good.

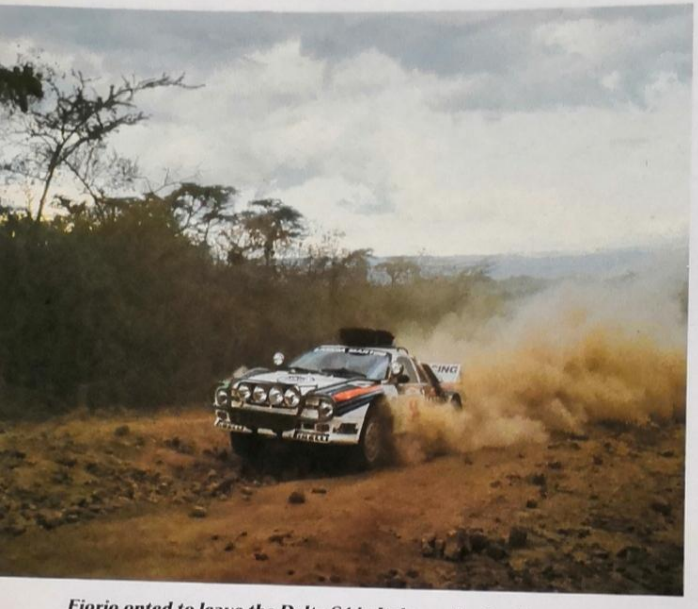
Preston's injection problems had been cured and the relieved Kenyan driver could finally get his foot down. Possibly too much so, in fact, since his Lancia rolled off the track and into a ditch shortly afterwards. Consequently, Alen's was the only Lancia left in the rally. Indeed, the Finn had a trouble-free second leg and, profiting from the difficulties of the rest of the field, managed to climb from 14th to 4th overall, equal with Kankkunen but nevertheless 1h 57s behind the clear leader, Bjorn Waldegaard.

The only problems to affect the Toyotas were a loose waste gate for Waldegaard, a puncture and an argument with a deep rut for Weber and hub problems for Torph who was forced to drive 160 km without rear brakes. At the end of the first leg, Waldegaard's penalties totalled 115 minutes, placing him 30m ahead of Weber, 49m ahead of Torph, 1h 57m ahead of Kankkunen and Alen, 2h 08m ahead of Group A leader, Kirkland, 2h 10m ahead of Mehta and 2h 39m ahead of Eriksson. Bourne, who had managed to take the lead in Group A, retired after his Subaru left the road.

The first 1,000 km of the 1,645 km long third and final leg, traditionally considered as being the toughest of the event, were run without interruption and it was now the turn of the Toyotas to hit trouble. Waldegaard fell victim to a problem similar to the one which had affected Torph the previous day when the hub failed and the wheel came away complete with the wheel shaft. Luckily, the Toyota service crew was nearby and only 20 minutes were lost before the Swede could get going again. Later, however, just prior to the Eldoret rest halt, a further 15 minutes were dropped when the rear axle of the Waldegaard's Celica was changed. As a result of these incidents, the lead very nearly changed hands as Weber got within 3m of his team-mate before the German too was slowed by rear axle problems, dropping him to third and within striking distance of Juha Kankkunen.

Third place had become a major objective for the Peugeot team, a result which would bring in a satisfactory amount of points for the World Championship especially if Alen could do no better than 5th. Kankkunen was now first on the road and able to drive without dust being thrown up by preceding competitors. Very soon after the Eldoret rest halt he got in front of Weber but his joy was short lived as the 205 T16's engine came to a halt soon afterwards. It took a long time to identify the reason for the breakdown and only after 45 minutes was it noticed that a lead had come off a relay. Kankkunen dropped behind Alen to 5th overall, a position he was to keep until the end of the rally. For Peugeot, the result could have tragic consequences in the context of the World Championship since the Lancia driver was able to get past Weber who was suffering from brake caliper problems. The Subarus of Kirkland and Tundo finished first and second in Group A, taking 6th and 7th places overall in front of Mehta who had been plagued at the end of the rally by incessant turbo problems. The Kenyan driver finished 8th ahead of the two private Lancia 037s of Criticos and Hellier. Sixteen crews finished the Safari, including Franz Wittmann who finished 12th.

Waldegaard has become somewhat of a specialist of African events. With three victories to his credit, he surely still has time to catch Mehta's record



Fiorio opted to leave the Delta S4 in Italy, preferring the proven robustness of the Rally 037. A gamble which paid off as Lancia pulled away from Peugeot in the title chase

faster than the principal driver of the Subaru team, Mike Kirkland. *"The team-manager came up to me and asked me to slow down a little,"* related Bourne. *"I am only on my first Safari whereas Kirkland is an experienced campaigner here. I suppose it's not such a bad idea to adapt my pace to his. It's a question of forcing myself to respect the rhythm."* Indeed. Group A winner on the New Zealand Rally for the last two years, Bourne tends to be more of a sprinter. During the second leg of the African event, he took firm command of the Group A category before going off at high speed and out of the rally. It's sometimes a good move to listen to what your team-manager has to say.

TWO UNHAPPY INCIDENTS

The second leg went off like a dream for the three Toyota crews who now monopolised the top three positions but it was a different story for the Lancias and Peugeots. As we waited for the cars to arrive back in Nairobi at the end of the leg, Vic Preston Jr. described how his rally had ended: *"I don't exactly know how I went off. I know every damned bend of the route by heart. The car just went sideways over a crest and into a series of rolls, ending up on its roof in a ditch. It took me five minutes to get free and to find my way through the bushes back to the road."*

Before the start, 'Junior' claimed that this was going to be his last Safari. *"Because Lancia is going to win,"* he firmly predicted. After his accident, his tune was different: *"We've put in a years work and done a full season over here without the slightest hitch. Why is it that new problems only crop up on the Safari itself?"* As he turned away, he mumbled, *"see you again in twelve months time."*

Makku Alen soon showed up at the Lancia garage where we were waiting. Unlike his team-mates, he had enjoyed a trouble-free run during the second leg and had quickly worked his way back up the leader board. The Finn, however, was far from cheerful. By radio, we had learnt that he had knocked over a young child. The child, who had tried to cross the road with a friend as Alen approached, was immediately taken to the nearest hospital by the Lancia helicopter.

Markku pulled up not far from us but remained in his car for a short while, lost in thought. When he finally got out, only Cesare Fiorio and Lancia doctor, Ben Bartoletti, dared approach him. The pained expression on his face indicated how moved he was by what had just happened. Markku has never been one to hide what is on his mind and now he felt a need to explain what he had just lived through. Silently shaking his head, he made his way across to the handful of journalists that were around, looking into our eyes for some sort of re-assurance.

His words reinforced by his unmistakable gestures, he began to relate how he had fought with the steering wheel, how he had put the car sideways in an attempt to avoid the child, how he had aimed for the verge and how he couldn't help running the poor kid over.

"There were two of them. They crossed the road just in front of me in a village where there were many spectators. I tried to steer clear of them and I would have succeeded if one of them hadn't taken fright and decided to turn around. I tried to drive my car off the road but in vain. The poor child was thrown up in the air."

Marrku fell silent again before one journalist asked how his hand was. *"My hand is nothing,"* he retorted, *"nothing compared with... I am... you know... completely..."*

"...Finito," he was going to say. The Finn only recovered from the incident after he had received confirmation from the organisers that the little girl was not too seriously hurt, escaping with a broken hand. Kenneth Eriksson was to be less fortunate.

Early in the final leg, his Golf's steering broke and the Swedish driver could not avoid leaving the road at quite a high speed, knocking over and killing a spectator. Eriksson chose to retire on the spot. Rallying is and most probably will always be a dangerous sport, we can only hope and do our utmost to ensure that the current spate of fatal accidents does not continue.

The last word goes to Bjorn Waldegaard who, talking of his Toyota Celica at the finish boasted, *"You've only got to fill it with petrol, change the tyres and you could do the rally all over again."* What's infuriating for the other manufacturers is that it's probably true! ■

IT HAPPENED IN KENYA

- **After hearing that Weber had run into the back of an Opel Manta 400, Mehta couldn't resist teasing the young German driver.** *"It looks like you're doing your utmost to increase Opel's sales of spare parts so they'll have enough money to run a car for you again."*
- *"I'm ashamed to say that Toyota are using helicopters for the first time this year,"* **admitted Henry Liddon.** *"I am nevertheless absolutely convinced that servicing by choppers should be banned."*
- **Winner of the five previous Safaris, Mehta had a hard job explaining to Jean Todt after the event why he could do no better than the two Group A Subarus that finished in front of him. Mehta is the official Kenyan importer of the Japanese make!**
- **During recce, Mike Kirkland knocked down a priest who was riding a motor-bike. It would appear that the words employed by the said priest to express his disarray were not very christian.**
- **Juha Piironen was punished out of court by his driver, after he had forgotten to take heed of an official bulletin which announced a route change. Kankkunen's sentence was categoric, Piironen was obliged to go back out into the bush by himself to correct the notes.**
- **Markku Alen decided to offer his prize money, a little over £500, to the family of the little girl he had knocked over during the rally.**
- **Average speed for Waldegaard was 95.846 kph.**

TECHNICAL DATA

34th Safari Rally
Date: 29th March - 2nd April, 1986.
4th round of the World Championships for makes, drivers and Group A drivers.
Start: Nairobi (Kenya).
Finish: Nairobi.
Route: Total length of 4,183km principally over gravel stages. There are no special stages on the Safari and crews have to try to respect target times for each section. The rally, divided into three legs, is run on tracks open to other road users.
First leg: Nairobi - Mtito Andei - Nairobi, Saturday, March 29th, 10h00 to Sunday, March 30th, 08h00. Total length of 1,287km and 20 time controls.
Second leg: Nairobi - Nyahururu - Nairobi, Sunday, March 30th, 16h00 to Monday, 31st March, 10h00. Total length of 1,251km and 21 time controls.
Third leg: Nairobi - Eldoret - Nairobi, Tuesday, April 1st, 00h00 to Wednesday, April 2nd, 10h00. Total length of 1,645km and 30 time controls.
Entered: 79. **Starters:** 69. **Finishers:** 16.
Weather: Mainly dry with the odd shower. Dust was a problem this year.

PAST RESULTS

(Last ten editions)
1976: Singh/Doig (Mitsubishi Colt Lancer)
1977: Waldegaard/Thorszelius (Ford Escort)
1978: Nicolas/Lefebvre (Peugeot 504)
1979: Mehta/Doughty (Datsun 160J)
1980: Mehta/Doughty (Datsun 160J)
1981: Mehta/Doughty (Datsun Violet)
1982: Mehta/Doughty (Datsun Violet)
1983: Vatanen/Harryman (Opel Ascona 400)
1984: Waldegaard/Thorszelius (Toyota Celica Twin Cam Turbo)
1985: Kankkunen/Gallagher (Toyota Celica Twin Cam Turbo)

FOR THE RECORD

Rally: ● The Safari was shortened by 1,000 km compared with previous years, following a request from FISA. ● For the first time, the Safari finished on Wednesday after Easter instead of Easter Monday ● The Mombasa rest halt on the Indian Ocean coast was dropped.
Drivers: ● First works drive with Peugeot for Mehta ● First works drive with Toyota for Weber and first World Championship drive with Toyota for Torph ● Lars Eric Torph becomes A-graded driver ● Third Safari win for Waldegaard and second win for Gallagher as co-driver.
Cars: ● Third successive victory on the Safari for the Toyota Celica.

WORLD RALLY CHAMPIONSHIP

(Drivers of Group A cars)

(Positions after 4 rounds)

1.	**Eriksson K. (S)**	**19 points**
2.	Wittmann (A)	17 points
3.	Del Zoppo (I)	13 points
	Oreille (F)	13 points
	Ericsson M. (S)	13 points
	Kirkland (EAK)	13 points
7.	Pettersson (S)	10 points
	Ortigao (P)	10 points
	Tundo (EAK)	10 points
10.	Bos (F)	8 points
	Anwar (EAK)	8 points

MAIN RETIREMENTS

TC3: Duncan/Munro (engine).
TC27: Stohl/Kaufmann (engine).
TC29: Preston/Lyall (accident).
TC37: Biasion/Siviera (engine).
TC38: Bourne/Fletcher (accident + OTL).
TC46: Shah/Drews (accident).
TC53: Eriksson/Diekmann (decision to withdraw following the death of the spectator he had hit).

SUCCESSIVE LEADERS

TC2 - TC4: A number of drivers on equal penalties.
TC5 - TC71: **Waldegaard/Gallagher**

WORLD RALLY CHAMPIONSHIP (Makes)

(After 4 out of 11 rounds)

1.	**Lancia**	**51 points**
2.	Peugeot	47 points
3.	Audi	29 points
4.	Toyota	20 points
5.	Volkswagen	19 points
6.	Ford	14 points
7.	Subaru	13 points
8.	Citroën	10 points

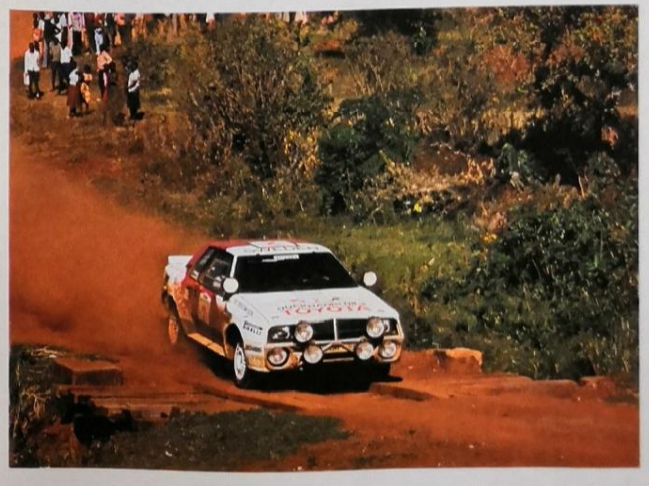
WORLD RALLY CHAMPIONSHIP (Drivers)

(After 4 out of 13 rounds)

1.	**Kankkunen (SF)**	**36 points**
2.	Alen (SF)	27 points
3.	Toivonen (SF)	20 points
	Moutinho (P)	20 points
	Waldegaard (S)	20 points
6.	Salonen (SF)	15 points
	Bica (P)	15 points
	Torph (S)	15 points
9.	Mikkola (SF)	12 points
	Grundel (S)	12 points
	Del Zoppo (I)	12 points

FINAL RESULTS

1. **Waldegaard/Gallagher (Toyota Twin Cam Turbo) 306 penalty points (1st Group B).**
2. Torph/Thorszelius (Toyota Twin Cam Turbo) 334 points.
3. Alen/Kivimaki (Lancia Rally 037) 372 points.
4. Weber/Wanger (Toyota Twin Cam Turbo) 380 points.
5. Kankkunen/Piironen (Peugeot 205 Turbo 16) 432 points.
6. **Kirkland/Nixon (Subaru RX Turbo) 457 points (1st Group A).**
7. Tundo/Thomson (Subaru RX Turbo) 491 points.
8. Mehta/Combes (Peugeot 205 Turbo 16) 492 points.
9. G. Criticos/Kravos (Lancia Rally 037) 545 points.
10. Hellier/Williamson (Lancia Rally 037) 551 points.



Alen/Kivimaki (Lancia Rally 037) Photo DPPI

BUT FOR A SERIES OF HEADACHES EARLY ON WHEN THE ALTERNATOR FAILED, ALEN MIGHT WELL HAVE CHALLENGED WALDEGAARD

Eriksson/Diekmann (VW Golf GTi) Photo A. Marzoli

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P O S T B A G

JUST A LITTLE RESPECT

Dear GPI,
At the end of the 1985 Australian Grand Prix, during which he had tangled with Mansell, Ayrton Senna excused his behaviour by explaining it was a bad day. It seems to escape peoples attention that under pressure he can be very dangerous.
His early domination of F3 during 1983 expired when rival Martin Brundle ran away with the Silverstone race. Brundle's quality of patience culminated in a win. To Senna, patience is not a virtue, panic is. In following races he proceeded to drive over the back of Brundle's winning car at Snetterton after trying to overtake on the grass. At Oulton Park he succeeded in 'sharing' Brundle's racing line by perching his car on top of the Britons.
Senna took the Championship and progressed to F1 in 1984, but during that year and early 1985 his car rarely kept together long enough to let his agression take over. At the Nurburgring, we watched him drive his car over the top of Rosberg, causing a first corner fracas, and his impatience fully revealed itself in serious incidents during the last four Grands Prix.
The most sickening part of all this is Senna's unwillingness to accept responsibility. His arrogant attitude is; 'you shouldn't have been there'.
Why is Senna not punished for endangering other drivers lives? F1 is the ambassador of motor racing, the sport will only be damaged if it seems that the drivers make and break the rules. Senna needs to be taught that talent alone does not make a racing driver. Respect is required if drivers are not to be unnecessarily endangered. By driving Mansell off the road in Rio he clearly illustrated his attitude to being beaten.

For the sake of motor racing, FISA, act now.

Roy Barclay
Clacton on Sea
Essex

The production editors reserve the right to modify correspondence without notice. We do not necessarily agree with readers' views expressed in these columns.

If we understand your question correctly, the part you are talking about is fitted so that the car in question complies with Article 3, sub-section 3, of the F1 Technical Regulations which reads "...Between the rear edge of the complete front wheels and the front edge of the complete rear wheels all sprung parts of the car visible from directly beneath the car must lie on one plane within a tolerance of + 5mm. All these parts must produce a uniform , solid, hard, rigid (no degree of freedom in relation to the body/ chassis unit), impervious surface under all circumstances..." The part in question is fitted so that rear-view mirrors, which often protrude beyond the sides of the cars, are not 'visible' from below. GPI.

POSTBAG CONGRATULATIONS

Dear GPI,
May I congratulate you for your recent excellent coverage of the World Rallying Championship. Combined with the marvellous F1 reports, an area of motorsport that I have also become interested in as a result, your monthly is a must.
The reports are well written and the photography is stunning. The editorials are both accurate and appropriate as, alas, shown in 'Action Now, Please' GPI number 101. Please keep it up!

An Avid Reader
Surrey
England

UNIQUE

Dear GPI,
I can see why André de Cortranze was trying to keep a secret of his water-heated shock-absorbers (team by team p. 70 GPI 101). He found out that, after assembling the system, everything was upside down.

Cec Ackerman
Lomé
Togo West Africa

Well spotted. As we commented, the Peugeot's front shock absorbers were really 'unique'! Apologies, GPI.

WHAT IS IT?

Dear GPI,
Perhaps the more observant and knowledgeable of your readers will be able to answer this letter. It concerns a small attachment which I have noticed recently on all the F1 cars. It is about 60 sq cm in area and less than 5 mm thick, located about half a metre ahead of the sidepods, on both sides of the car. It's underside is flush with flat bottom, and it projects horizontally from the bodywork.
Is it some devious device to circumvent a width regulation, a footrest, or just something to do with the transportation of the car?

A J McClarty
Plumstead
Capetown
South Africa

FAN CLUB DISAPPEARED?

Dear GPI,
In 1983 Peter McKenzie and Charlie Whiting (2 mechanics from Brabham) started a Nelson Piquet fan club of which I am a member. In '83 and '84 I received regularly magazines etc. In July 1985 I renewed my membership, sending £6 to the club secretary M. Bexon. In August I received a colour print of the BT53 and after that nothing and no replies to my 4 letters either. Whats happened, is the fan club dead?

P Van De Berkt
Molenvliet 30
4791 GA Klundert
Holland

Nelson Piquet's Fan Club can be contacted at: P.O. Box 22F, Chessington, Surrey KT9 1DJ, England. A membership application form will be sent to you. GPI.

Dear Readers,
These columns are yours to vent your views and make suggestions. Please write to: The Production Editor, Grand Prix International, 7 rue de Lille, 75007 Paris.

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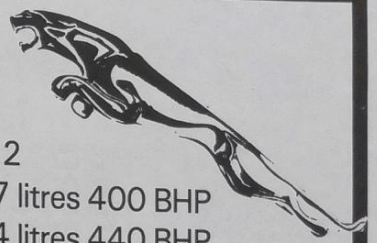

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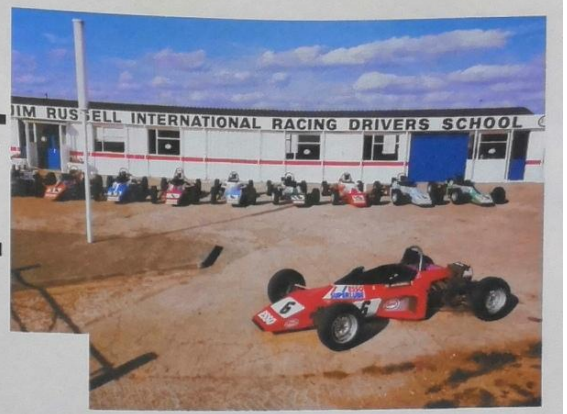

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